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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,653	11/16/2006	Wei Cheng	05-937-B5	5425

20306 7590 05/22/2008

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EXAMINER	
JAISLE, CECILIA M	

ART UNIT	PAPER NUMBER
1624	

MAIL DATE	DELIVERY MODE
05/22/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/576,653	CHENG ET AL.	
	Examiner	Art Unit	
	CECILIA M. JAISLE	1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 March 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-43* is/are pending in the application.

4a) Of the above claim(s) *37-43* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED OFFICE ACTION

Request for Prior Art

If the compounds excluded by claim 1 are known in the prior art, Applicants are requested to specifically identify the source thereof. If the compounds excluded by claim 1 are not known in the prior art, Applicants are requested to specifically so state on the record.

Lack of Unity

Applicants' election with traverse of Group II, claims 1-36, directed to compounds, compositions and metabolites of Formula I wherein two of B, D and C are nitrogen, in the Response, filed March 5, 2008, to the Lack of Unity Requirement is acknowledged. To the extent that claims 1-36 are directed to the elected subject matter, they are under examination. Otherwise, claims 1-36 are withdrawn from examination to the extent that they are directed to non-elected subject matter. Claims 37-43 are withdrawn from examination.

Applicants traverse the Restriction Requirement. Applicants are reminded that, because this application is a National Stage application filed under 35 U.S.C. 371, this application is not subject to a Restriction Requirement, but to a Lack of Unity Requirement.

When the lack of unity of invention requirement was set forth in the Office Action of Feb. 5, 2008, twelve different groups of claims were listed and an explanation was

given as to why each of the twelve group lacks unity with each other group (i.e., why there is no single general inventive concept) specifically describing the unique special technical feature in each group.

Applicants' attention is invited to MPEP § 1850, *inter alia*, for a detailed discussion of Unity of Invention. The basic principle is that an application should relate to only one invention or, if there is more than one invention, applicants have a right to include in a single application only those inventions which are so linked as to form a single general inventive concept.

A group of inventions is considered linked to form a single general inventive concept where a technical relationship exists among the inventions that involves at least one common or corresponding special technical feature. The expression special technical features means those technical features that define the contribution which each claimed invention, considered as a whole, makes over the prior art.

Applicants argue that claim 1 is generic and that examination of the claims should be expanded to the non-elected subject matter. However, the determination regarding unity of invention is made without regard to whether a group of inventions is claimed in separate claims or as alternatives within a single claim. Applicants also argue that the claims are written in Markush format. The basic criteria for unity of invention are the same, regardless of the manner in which applicant chooses to draft a claim or claims, such as, e.g., Markush claim format.

Again, Applicants are reminded that that this requirement is for Lack of Unity and not for Restriction/Election. The Requirement for Lack of Unity as set forth in the Office Action of Feb. 5, 2008 is proper for all reasons of record therein and accordingly this requirement is maintained.

Rejections Under 35 USC 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-36 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for Formula I compounds and their salts and prodrugs, does not reasonably provide enablement for hydrates thereof. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

The claims, insofar as they embrace hydrates, are not enabled. The specification prophesizes hydrates, but the numerous examples presented all failed to produce a hydrate. The evidence of the specification is clear: These compounds do not possess the property of forming hydrates; there is no evidence that such hydrates even exist.

This is a circumstance where the "specification is evidence of its own inadequacy" (*In re Rainer*, 153 USPQ 802, 807). Hydrates cannot be simply willed into existence. *Morton International Inc. v. Cardinal Chemical Co.*, 28 USPQ2d 1190 states:

> The specification purports to teach, with over fifty examples, the preparation of the claimed compounds with the required connectivity. However ... there is no evidence that such compounds exist ... the examples of the '881 patent do not produce the postulated compounds ... [T]here is ... no evidence that such compounds even exist.

The same circumstance appears true here: no evidence shows that hydrates of these compounds actually exist; if they did, they would have formed. Applicants must show making hydrates or limit the claims accordingly.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- The exclusionary proviso in claims 1 and 21 in the definition of X and Y fails to particularly point out and distinctly claim the intended subject matter. Because Y is not initially defined as –C(H)R6a-, it cannot be excluded when X is –O- or –N(R5)-. In this same exclusionary proviso, it is not understood what is meant by "wherein at least one of R20, R21 and R22 is selected from …" Is this definition of R20, R21 and R22 meant to be included or excluded from the claimed subject matter?

- In the exclusionary proviso at the end of claims 1 and 21, the moiety identified as "sulfanyl" is not understood. US 20080090838 states "Sulfanyl" refers to groups --S—R." It is not understood if any difference in structure is intended, e.g., in the identification of a moiety as "methylthio" or "methylsulfanyl." Clarification is required.
- A "2-(6-amino-3,5-dicyano-pyridin-2-ylsulfanyl)-N-phenyl acetamide derivative" fails to define the intended excluded compound in claims 1 and 21. "Derivative" has no specific set meaning. The term "derivative" may mean a residue or a different compound derived from the recited compound. It is therefore not possible to know which derivatives are envisaged as derived from the identified compound. The term "derivative" can refer to a compound that is formed from a similar compound or a compound that can be imagined to arise from another compound, if one atom is replaced with another atom or group of atoms. "Derivative" is of unknown scope and meaning.

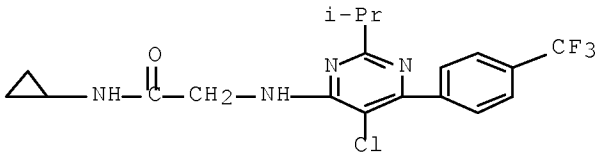
Rejections Under 35 USC 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

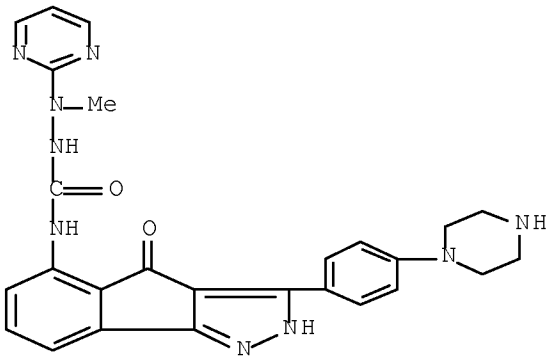
> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1- 4 and 35 are rejected under 35 USC 102(a) over Murata, et al., JP 2001139472, published 20010522, describing RN 251299-06-6, Acetamide, 2-[[5-chloro-2-(1-methylethyl)-6-[4-(trifluoromethyl)phenyl]-4-pyrimidinyl]amino]-N-cyclopropyl-,

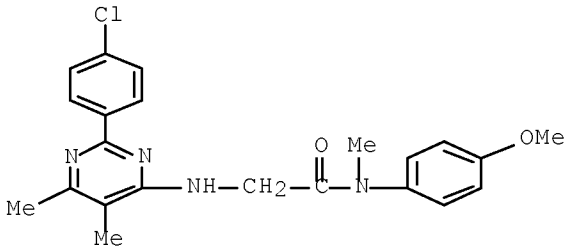


Claims 1- 4 and 35 are rejected under 35 USC 102(a) over Carini, US 6849631, entitled to the date of 20001208, describing RN 435337-24-9, Hydrazinecarboxamide, N-[2,4-dihydro-4-oxo-3-[4-(1-piperazinyl)phenyl]indeno[1,2-c]pyrazol-5-yl]-2-methyl-2-(2-pyrimidinyl)-,



Claims 1- 4 and 35 are rejected under 35 USC 102(a) over Furukawa, et al., JP

2003221337, published 20030805, describing RN 184108-07-4, Acetamide, 2-[[2-(4-chlorophenyl)-5,6-dimethyl-4-pyrimidinyl]amino]-N-(4-methoxyphenyl)-N-methyl-,



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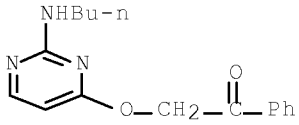
Claims 1- 4 and 35 are rejected under 35 USC 102(a) over Font, et al., Journal of Combinatorial Chemistry (2003), 5(3), 311-321, describing

RN 503855-73-0, Ethanone, 2-[[2-(butylamino)-4-pyrimidinyl]oxy]-1-phenyl-,



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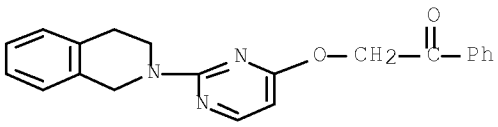
RN 503855-74-1, Ethanone, 2-[[2-(3,4-dihydro-2(1H)-isoquinolinyl)-4-pyrimidinyl]oxy]-1-phenyl-,



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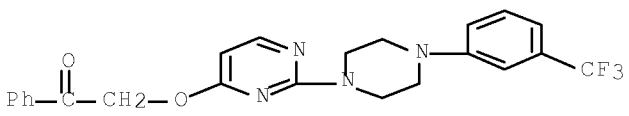
RN 503855-76-3, Ethanone, 1-phenyl-2-[[2-[4-[3-(trifluoromethyl)phenyl]-1-piperazinyl]-4-pyrimidinyl]oxy]-,



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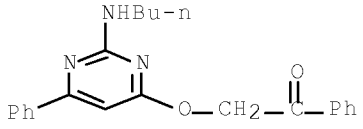
RN 503855-78-5, Ethanone, 2-[[2-(butylamino)-6-phenyl-4-pyrimidinyl]oxy]-1-phenyl-,



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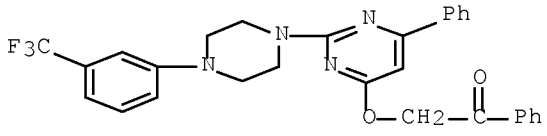
RN 503855-80-9, Ethanone, 1-phenyl-2-[[6-phenyl-2-[4-[3-(trifluoromethyl)phenyl]-1-piperazinyl]-4-pyrimidinyl]oxy]-,



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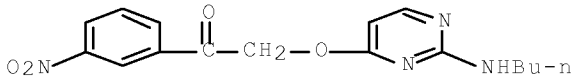
RN 503855-82-1, Ethanone, 2-[[2-(butylamino)-4-pyrimidinyl]oxy]-1-(3-nitrophenyl)-,



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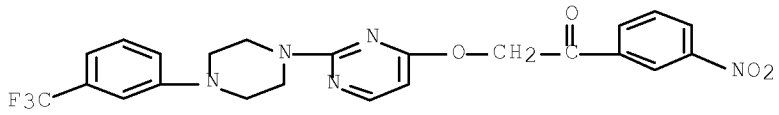
RN 503855-83-2, Ethanone, 1-(3-nitrophenyl)-2-[[2-[4-[3-(trifluoromethyl)phenyl]-1-piperazinyl]-4-pyrimidinyl]oxy]-,



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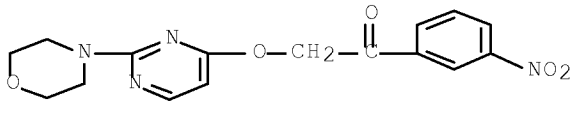
RN 503855-85-4, Ethanone, 2-[[2-(4-morpholinyl)-4-pyrimidinyl]oxy]-1-(3-nitrophenyl)-,



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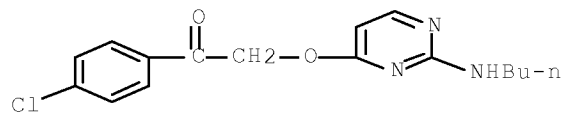
RN 503855-87-6, Ethanone, 2-[[2-(butylamino)-4-pyrimidinyl]oxy]-1-(4-chlorophenyl)-,



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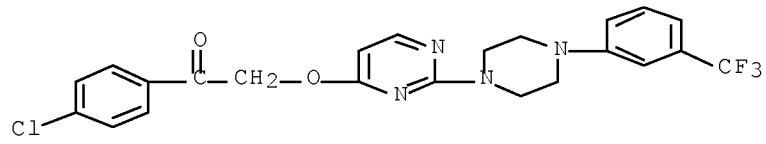
RN 503855-89-8, Ethanone, 1-(4-chlorophenyl)-2-[[2-[4-[3-(trifluoromethyl)phenyl]-1-piperazinyl]-4-pyrimidinyl]oxy]-,



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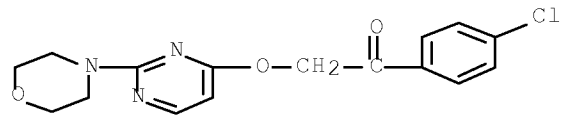
RN 503855-90-1, Ethanone, 1-(4-chlorophenyl)-2-[[2-(4-morpholinyl)-4-pyrimidinyl]oxy]-,



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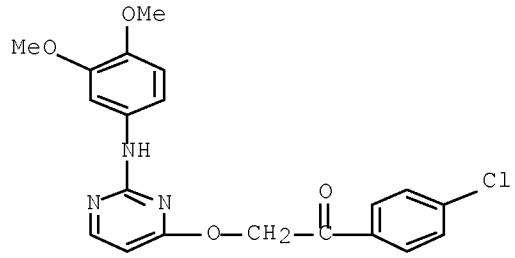
RN 503855-91-2, Ethanone, 1-(4-chlorophenyl)-2-[[2-[(3,4-dimethoxyphenyl)amino]-4-pyrimidinyl]oxy]-,



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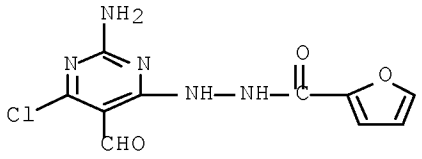
Claims 1- 4 and 35 are rejected under 35 USC 102(a) over Baraldi, et al., Bioorganic & Medicinal Chemistry (2003), 11(19), 4161-4169, describing RN 377729-80-1, 2-Furancarboxylic acid, 2-(2-amino-6-chloro-5-formyl-4-

pyrimidinyl)hydrazide,



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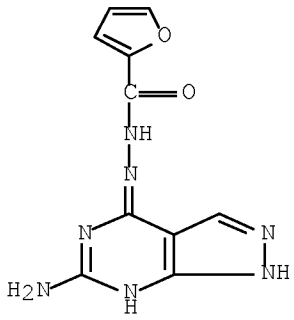
RN 377729-81-2, 2-Furancarboxylic acid, 2-(6-amino-1H-pyrazolo[3,4-d]pyrimidin-4-yl)hydrazide,



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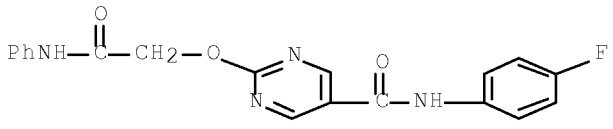
useful as A3 adenosine receptor antagonists.

Claims 1- 4 and 35 are rejected under 35 USC 102(a) over Baughman, et al., US 7176310, entitled to the priority date of 20020409, describing compounds such as RN 923292-27-7, 5-Pyrimidinecarboxamide, N-(4-fluorophenyl)-2-[2-oxo-2-(phenylamino)ethoxy]-,



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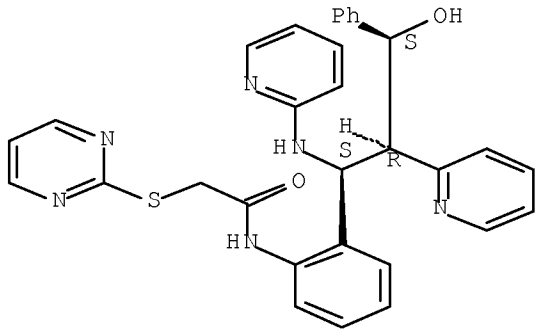
useful as CXCR2 receptor antagonists for treatment of inflammation.

Claims 1-4 and 35 are rejected under 35 USC 102(b) over Kirsch, et al., WO 2000020393, published 20000413, describing RN 263876-87-5, Acetamide, N-[2-[(1S,2R,3S)-3-hydroxy-3-phenyl-2-(2-pyridinyl)-1-(2-pyridinylamino)propyl]phenyl]-2-(2-pyrimidinylthio)-,



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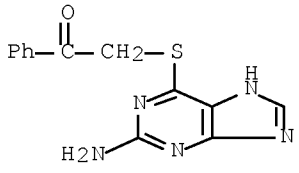
Claims 1-4 and 35 are rejected under 35 USC 102(b) over Gour, et al., US Pat. No. 6031072, issued 20000229, describing

RN 98018-39-4, Ethanone, 2-[(2-amino-1H-purin-6-yl)thio]-1-phenyl-,



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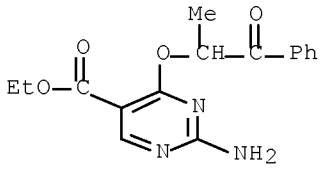
useful as peptidomimetic modulators of cell adhesion.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Sasaki, et al., Bioorganic & Medicinal Chemistry Letters (2002), 12(16), 2073-2077, describing RN 489473-23-6, 5-Pyrimidinecarboxylic acid, 2-amino-4-(1-methyl-2-oxo-2-

phenylethoxy)-, ethyl ester,



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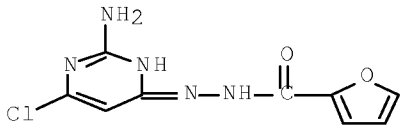
as potent nonpeptide LH-releasing hormone antagonists.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Atsumi, et al., JP 2002037787, published 20020206, describing

RN 394652-85-8, 2-Furancarboxylic acid, 2-(2-amino-6-chloro-4-pyrimidinyl)hydrazide,



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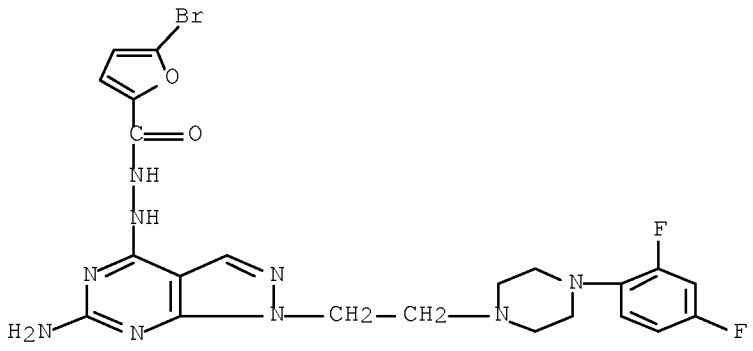
as adenosine A2A receptor antagonist.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Neustadt, et al., WO 2001092264A1, published 20011206, describing

RN 377730-01-3, 2-Furancarboxylic acid, 5-bromo-, 2-[6-amino-1-[2-[4-(2,4-difluorophenyl)-1-piperazinyl]ethyl]-1H-pyrazolo[3,4-d]pyrimidin-4-yl]hydrazide,



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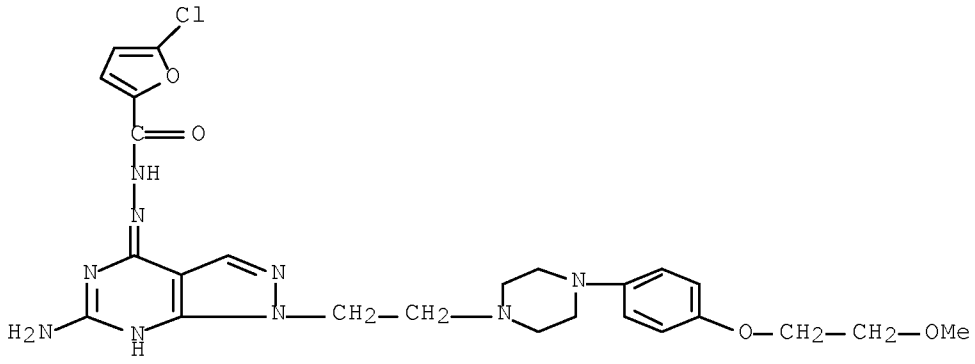
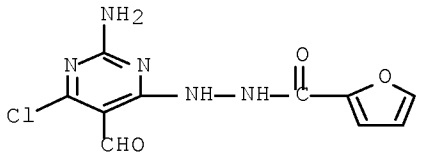
RN 377730-02-4, 2-Furancarboxylic acid, 5-chloro-, 2-[6-amino-1-[2-[4-[4-(2-methoxyethoxy)phenyl]-1-piperazinyl]ethyl]-1H-pyrazolo[3,4-d]pyrimidin-4-yl]hydrazide,



,

RN 377729-80-1, 2-Furancarboxylic acid, 2-(2-amino-6-chloro-5-formyl-4-pyrimidinyl)hydrazide,



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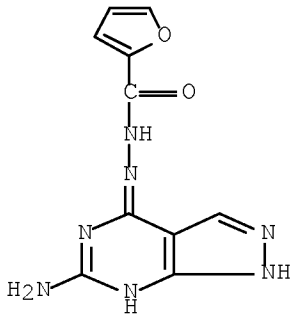
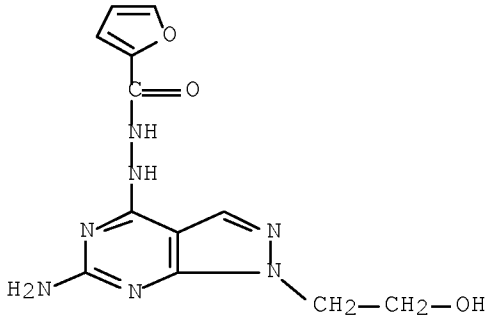
RN 377729-81-2, 2-Furancarboxylic acid, 2-(6-amino-1H-pyrazolo[3,4-d]pyrimidin-4-yl)hydrazide,



,

RN 377729-86-7, 2-Furancarboxylic acid, 2-[6-amino-1-(2-hydroxyethyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]hydrazide,



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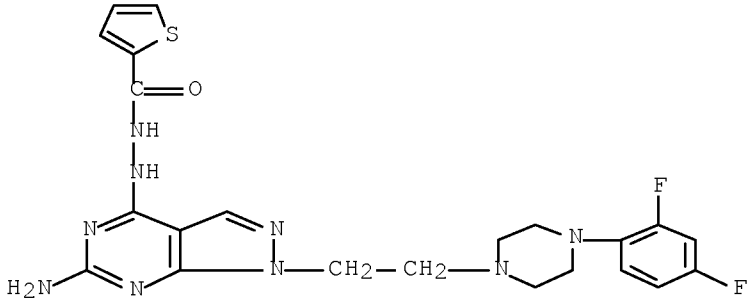
RN 377729-93-6, 2-Thiophenecarboxylic acid, 2-[6-amino-1-[2-[4-(2,4-difluorophenyl)-1-piperazinyl]ethyl]-1H-pyrazolo[3,4-d]pyrimidin-4-yl]hydrazide,

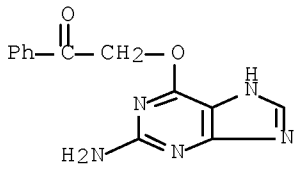


,

as adenosine A2a receptor antagonists.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Griffin, et al., US 6303618, issued 20011016, describing

RN 161058-76-0, Ethanone, 2-[(2-amino-1H-purin-6-yl)oxy]-1-phenyl-,



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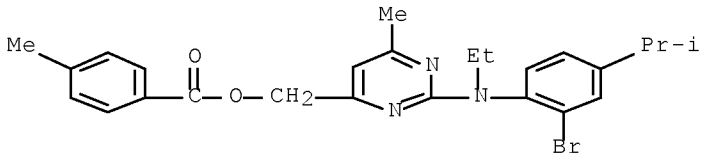
as potential inhibitors of the DNA-repair protein O6-alkylguanine-DNA alkyltransferase.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Aldrich, et al., US 6107301, issued 20000822, describing

RN 288624-53-3, Benzoic acid, 4-methyl-, [2-[[2-bromo-4-(1-methylethyl)phenyl]-ethylamino]- 6-methyl-4-pyrimidinyl]methyl ester,

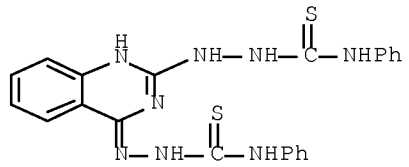


,

as CRF inhibitors.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over El-Tombary, et al., Farmaco (1999), 54(7), 486-495, describing

RN 247258-02-2, Hydrazinecarbothioamide, 2,2'-(2,4-quinazolinediyl)bis[N-phenyl-,



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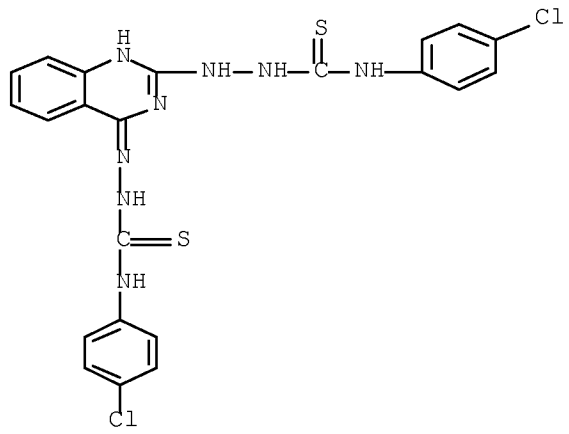
RN 247258-03-3, Hydrazinecarbothioamide, 2,2'-(2,4-quinazolinediyl)bis[N-(4-chlorophenyl)-,



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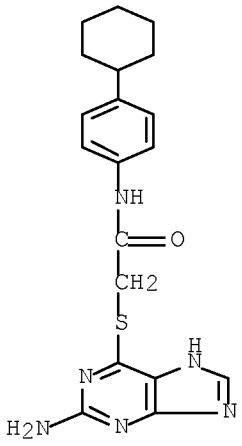
having an antitoxoplasmosis effect.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Connell, et al., US 5939462, issued 19990817, describing

RN 212073-59-1, Acetamide, 2-[(2-amino-1H-purin-6-yl)thio]-N-(4-cyclohexylphenyl)-,



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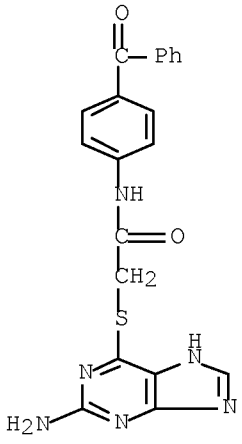
RN 212073-69-3, Acetamide, 2-[(2-amino-1H-purin-6-yl)thio]-N-(4-benzoylphenyl)-,



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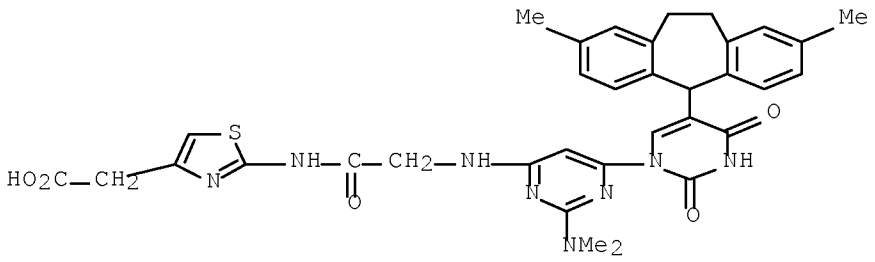
as α-alkoxy- and α-thioalkoxyamide neuropeptide Y NPY5 receptor antagonists.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Kindon, et al., US 6107297, issued 20000822, describing

RN 220040-10-8, 4-Thiazoleacetic acid, 2-[[[[5-(10,11-dihydro-2,8-dimethyl-5H-dibenzo[a,d]cyclohepten-5-yl)-2'-(dimethylamino)-3,4-dihydro-2,4-dioxo[1(2H),4'-bipyrimidin]-6'-yl]amino]acetyl]amino]-,



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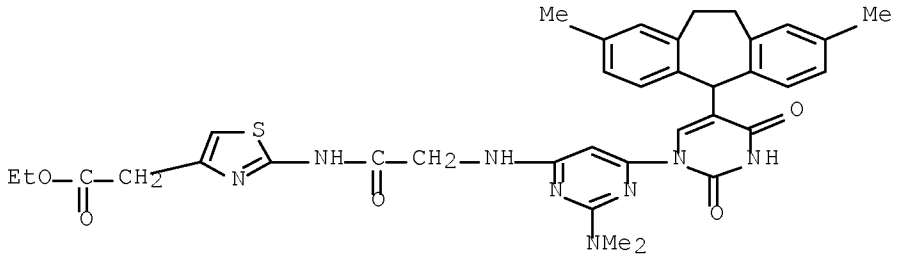
RN 220040-81-3, 4-Thiazoleacetic acid, 2-[[[[5-(10,11-dihydro-2,8-dimethyl-5H-dibenzo[a,d]cyclohepten-5-yl)-2'-(dimethylamino)-3,4-dihydro-2,4-dioxo[1(2H),4'-bipyrimidin]-6'-yl]amino]acetyl]amino]-, ethyl ester,

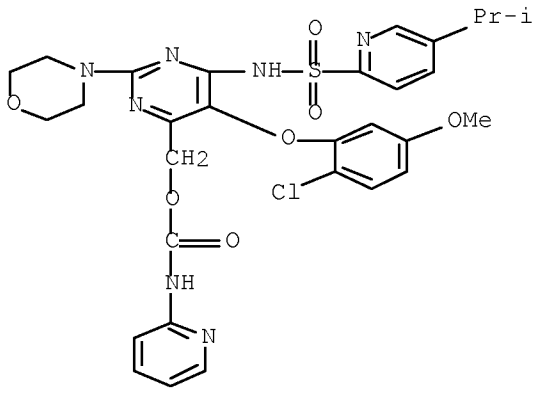


,

as P2 purinoceptor antagonists.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Breu, et al., US 5837708, issued 19981117, describing

RN 179400-62-5, Carbamic acid, 2-pyridinyl-, [5-(2-chloro-5-methoxyphenoxy)-6-[[[5-(1-methylethyl)-2-pyridinyl]sulfonyl]amino]-2-(4-morpholinyl)-4-pyrimidinyl]methyl ester,

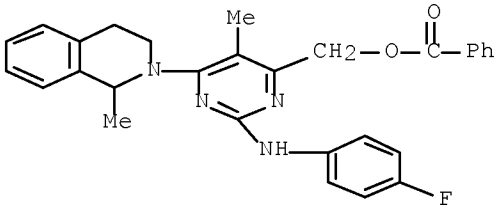


,

as an endothelin antagonist.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Lee, et al., WO 9843968, published 19981008, describing

RN 214538-62-2, 4-Pyrimidinemethanol, 6-(3,4-dihydro-1-methyl-2(1H)-isoquinolinyl)-2-[(4-fluorophenyl)amino]-5-methyl-, benzoate ester,



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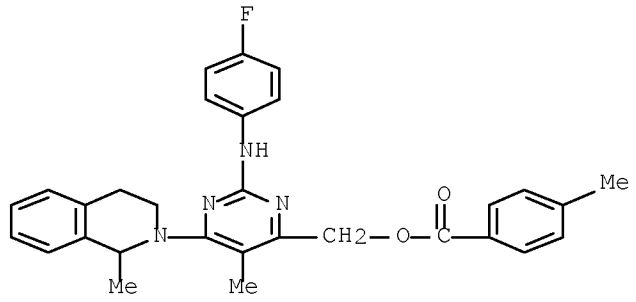
RN 214538-66-6, Benzoic acid, 4-methyl-, [6-(3,4-dihydro-1-methyl-2(1H)-isoquinolinyl)-2-[(4-fluorophenyl)amino]-5-methyl-4-pyrimidinyl]methyl ester,



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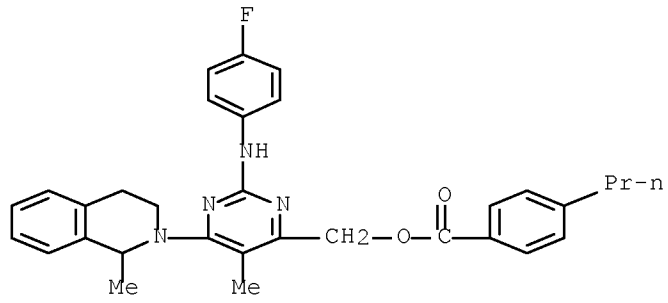
RN 214538-70-2, Benzoic acid, 4-propyl-, [6-(3,4-dihydro-1-methyl-2(1H)-isoquinolinyl)-2-[(4-fluorophenyl)amino]-5-methyl-4-pyrimidinyl]methyl ester,



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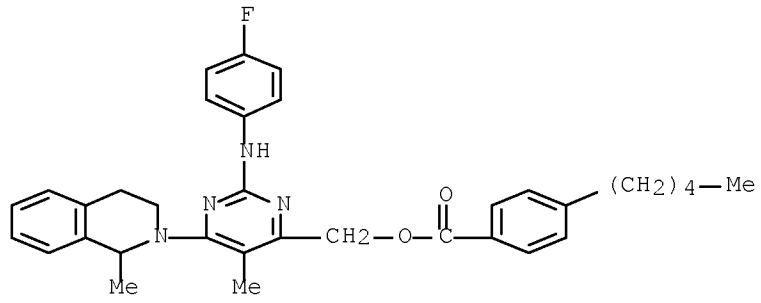
RN 214538-73-5, Benzoic acid, 4-pentyl-, [6-(3,4-dihydro-1-methyl-2(1H)-isoquinolinyl)-2-[(4-fluorophenyl)amino]-5-methyl-4-pyrimidinyl]methyl ester,



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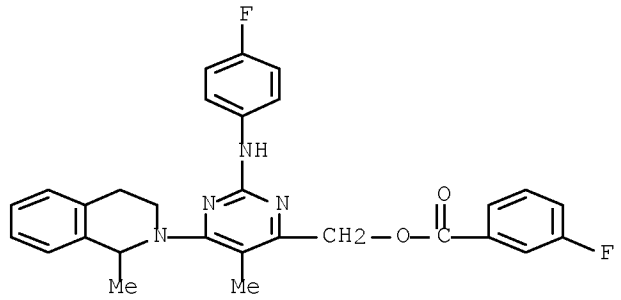
RN 214538-77-9, Benzoic acid, 3-fluoro-, [6-(3,4-dihydro-1-methyl-2(1H)-isoquinolinyl)-2- [(4-fluorophenyl)amino]-5-methyl-4-pyrimidinyl]methyl ester,



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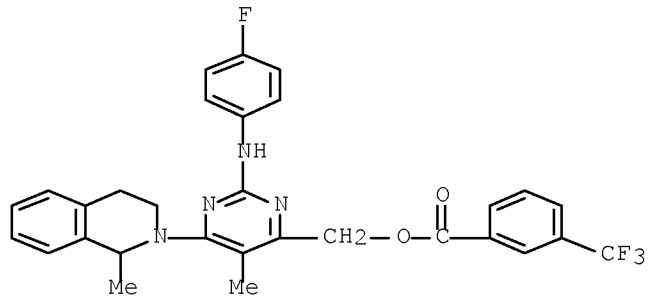
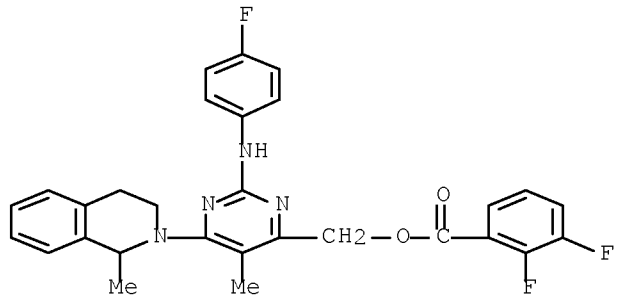
RN 214538-79-1, Benzoic acid, 3-(trifluoromethyl)-, [6-(3,4-dihydro-1-methyl-2(1H)-isoquinolinyl)-2-[(4-fluorophenyl)amino]-5-methyl-4-pyrimidinyl]methyl ester,



,

RN 214538-81-5, Benzoic acid, 2,3-difluoro-, [6-(3,4-dihydro-1-methyl-2(1H)-isoquinolinyl)-2-[(4-fluorophenyl)amino]-5-methyl-4-pyrimidinyl]methyl ester,



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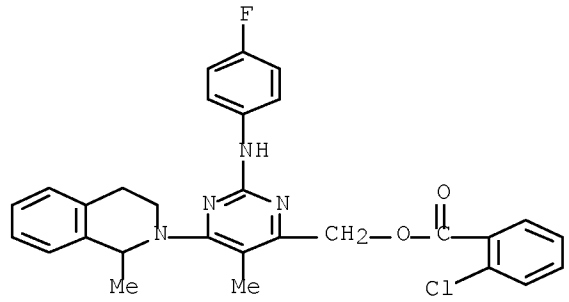
RN 214538-83-7, Benzoic acid, 2-chloro-, [6-(3,4-dihydro-1-methyl-2(1H)-isoquinolinyl)-2- [(4-fluorophenyl)amino]-5-methyl-4-pyrimidinyl]methyl ester,



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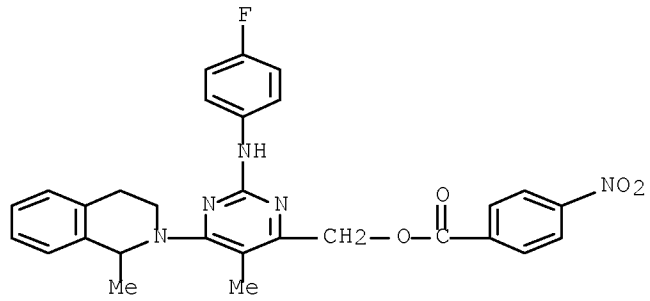
RN 214538-89-3, 4-Pyrimidinemethanol, 6-(3,4-dihydro-1-methyl-2(1H)-isoquinolinyl)-2-[(4-fluorophenyl)amino]-5-methyl-, 4-nitrobenzoate ester,



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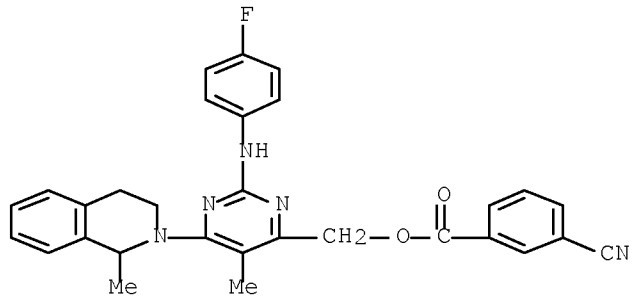
RN 214538-91-7, Benzoic acid, 3-cyano-, [6-(3,4-dihydro-1-methyl-2(1H)-isoquinolinyl)-2-[(4-fluorophenyl)amino]-5-methyl-4-pyrimidinyl]methyl ester,



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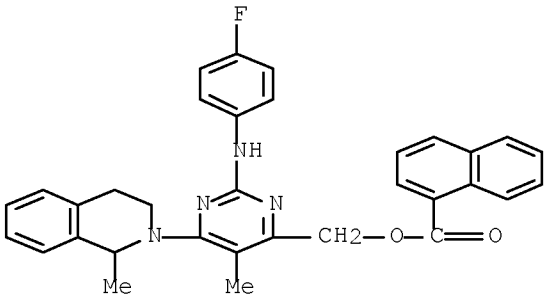
RN 214538-94-0, 1-Naphthalenecarboxylic acid, [6-(3,4-dihydro-1-methyl-2(1H)-isoquinolinyl)-2-[(4-fluorophenyl)amino]-5-methyl-4-pyrimidinyl]methyl ester,

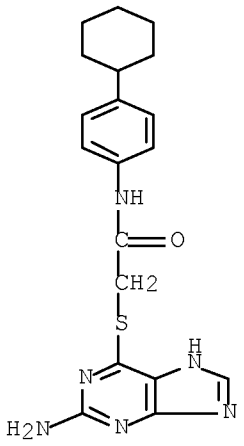


,

possessing anti-secretory activity.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Connell, et al., WO 9835944, published 19980820, describing

RN 212073-59-1, Acetamide, 2-[(2-amino-1H-purin-6-yl)thio]-N-(4-cyclohexylphenyl)-,



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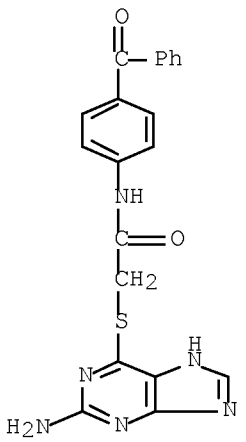
RN 212073-69-3, Acetamide, 2-[(2-amino-1H-purin-6-yl)thio]-N-(4-benzoylphenyl)-,

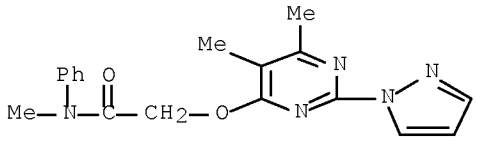


,

as NPY5 receptor antagonists.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Murata, et al., WO 9809960, published 19980312, describing

RN 204393-83-9, Acetamide, 2-[[5,6-dimethyl-2-(1H-pyrazol-1-yl)-4-pyrimidinyl]oxy]-N-methyl-N-phenyl-,



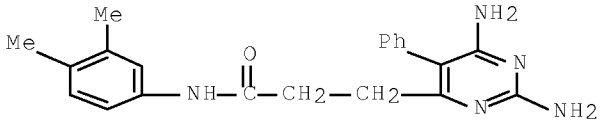
,

as pharmaceuticals with affinity for peripheral benzodiazepine receptors.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Hardy, et al., Experimental Parasitology (1997), 87(3), 157-169, describing

RN 200127-59-9, 4-Pyrimidinepropanamide, 2,6-diamino-N-(3,4-dimethylphenyl)-5-

phenyl-,



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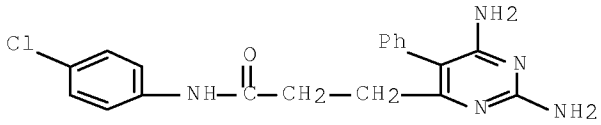
RN 200127-60-2, 4-Pyrimidinepropanamide, 2,6-diamino-N-(4-chlorophenyl)-5-phenyl-,



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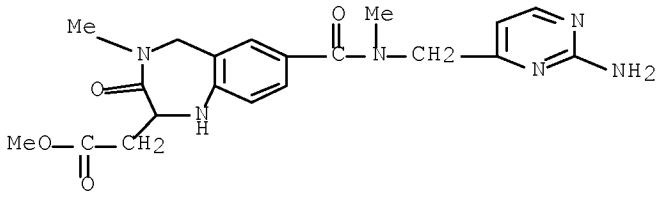
for use in biochemical and genetic tests for inhibitors of Leishmania pteridine pathways.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Ali, et al., WO 9724122, published 19970710, describing

RN 193470-38-1, 1H-1,4-Benzodiazepine-2-acetic acid, 7-[[[(2-amino-4-pyrimidinyl)methyl]methylamino]carbonyl]-2,3,4,5-tetrahydro-4-methyl-3-oxo-, methyl ester,



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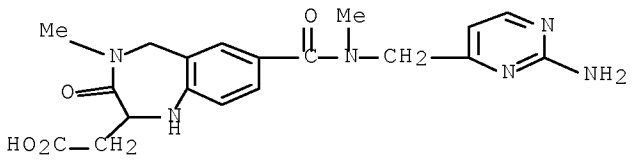
RN 193469-87-3, 1H-1,4-Benzodiazepine-2-acetic acid, 7-[[[(2-amino-4-pyrimidinyl)methyl]methylamino]carbonyl]-2,3,4,5-tetrahydro-4-methyl-3-oxo-,

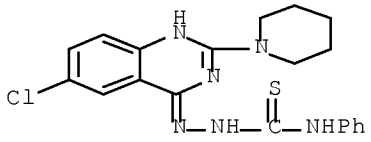


,

useful as vitronectin receptor antagonists.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Jantova, et al., Folia Biologica (Prague) (1997), 43(2), 83-89, describing

RN 154475-57-7, Hydrazinecarbothioamide, 2-[6-chloro-2-(1-piperidinyl)-4-quinazolinyl]-N-phenyl-,



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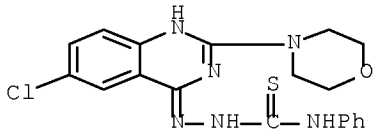
RN 154475-58-8, Hydrazinecarbothioamide, 2-[6-chloro-2-(4-morpholinyl)-4-quinazolinyl]-N-phenyl-,



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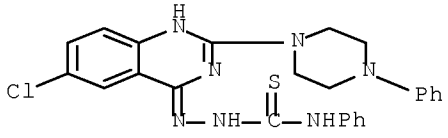
RN 154475-59-9, Hydrazinecarbothioamide, 2-[6-chloro-2-(4-phenyl-1-piperazinyl)-4-quinazolinyl]-N-phenyl-,



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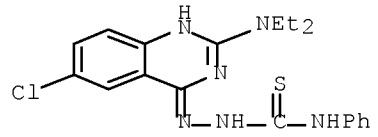
RN 169136-49-6, Hydrazinecarbothioamide, 2-[6-chloro-2-(diethylamino)-4-quinazolinyl]-N-phenyl-,



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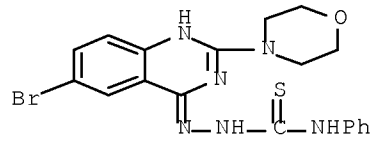
RN 169136-50-9, Hydrazinecarbothioamide, 2-[6-bromo-2-(4-morpholinyl)-4-quinazolinyl]-N-phenyl-,



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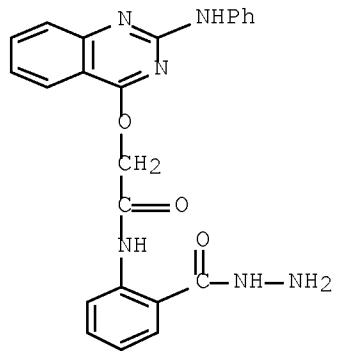
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Abd El-Fattah, Indian Journal of Heterocyclic Chemistry (1995), 4(3), 199-202, describing

RN 158608-70-9, Benzoic acid, 2-[[[[2-(phenylamino)-4-quinazolinyl]oxy]acetyl]amino]-, hydrazide,



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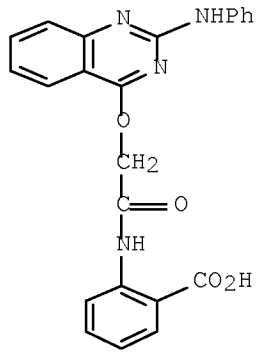
RN 165278-09-1, Benzoic acid, 2-[[[[2-(phenylamino)-4-quinazolinyl]oxy]acetyl]amino]-,



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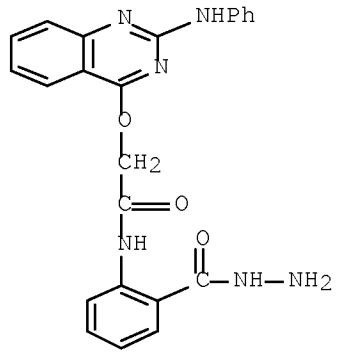
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Ismail, Journal of the Serbian Chemical Society (1994), 59(6), 353-8, describing

RN 158608-70-9, Benzoic acid, 2-[[[[2-(phenylamino)-4-quinazolinyl]oxy]acetyl]amino]-, hydrazide,



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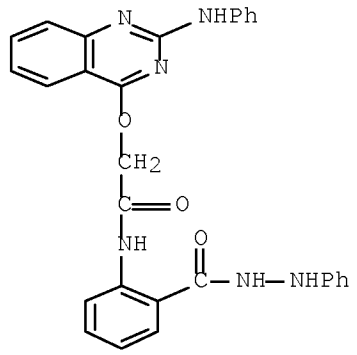
RN 158608-71-0, Benzoic acid, 2-[[[[2-(phenylamino)-4-quinazolinyl]oxy]acetyl]amino]-, 2-phenylhydrazide,



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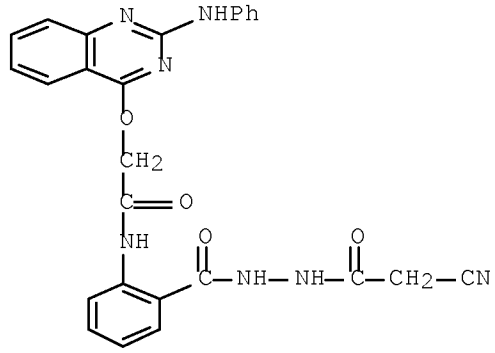
RN 158608-72-1, Benzoic acid, 2-[[[[2-(phenylamino)-4-quinazolinyl]oxy]acetyl]amino]-, 2-(cyanoacetyl)hydrazide,



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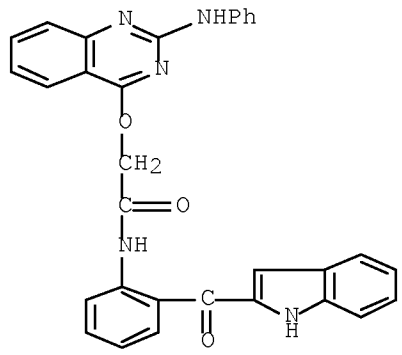
RN 158608-75-4, Acetamide, N-[2-(1H-indol-2-ylcarbonyl)phenyl]-2-[[2-(phenylamino)-4-quinazolinyl]oxy]-,



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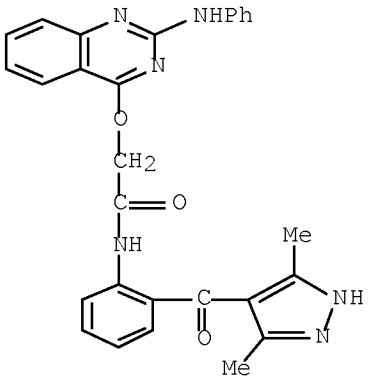
RN 158608-76-5, Acetamide, N-[2-[(3,5-dimethyl-1H-pyrazol-4-yl)carbonyl]phenyl]-2-[[2-

(phenylamino)-4-quinazolinyl]oxy]-,



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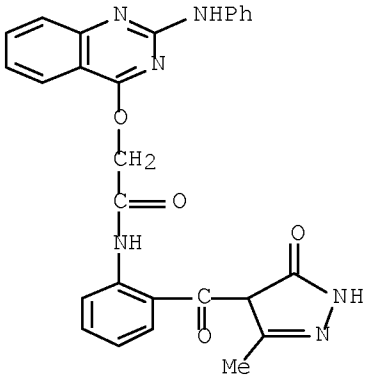
RN 158608-77-6, Acetamide, N-[2-[(4,5-dihydro-3-methyl-5-oxo-1H-pyrazol-4-yl)carbonyl]phenyl]-2-[[2-(phenylamino)-4-quinazolinyl]oxy]-,



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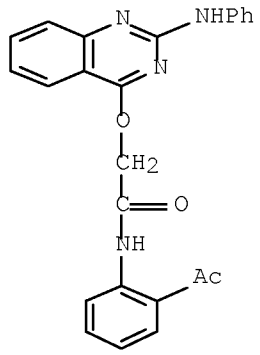
RN 158608-78-7, Acetamide, N-(2-acetylphenyl)-2-[[2-(phenylamino)-4-quinazolinyl]oxy]-,



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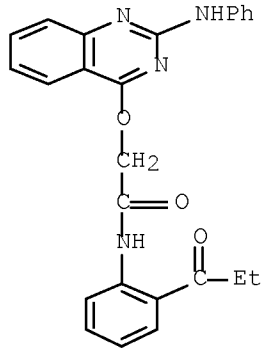
RN 158608-79-8, Acetamide, N-[2-(1-oxopropyl)phenyl]-2-[[2-(phenylamino)-4-quinazolinyl]oxy]-,



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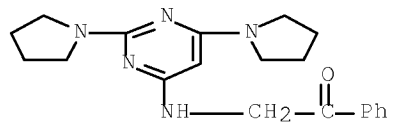
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Ayer, et al., US 5502187, issued 19960326, describing

RN 157014-36-3, Ethanone, 2-[(2,6-di-1-pyrrolidinyl-4-pyrimidinyl)amino]-1-phenyl-,



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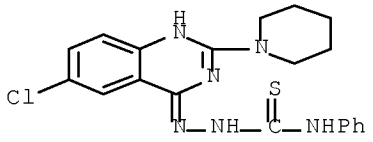
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Spirkova, et al.,

Collection of Czechoslovak Chemical Communications (1994), 59(1), 222-6, describing

RN 154475-57-7, Hydrazinecarbothioamide, 2-[6-chloro-2-(1-piperidinyl)-4-quinazolinyl]-N-phenyl-,



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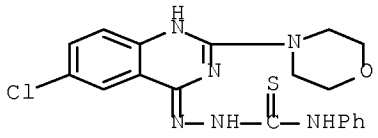
RN 154475-58-8, Hydrazinecarbothioamide, 2-[6-chloro-2-(4-morpholinyl)-4-quinazolinyl]-N-phenyl-,



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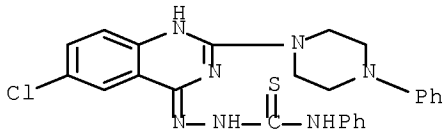
RN 154475-59-9, Hydrazinecarbothioamide, 2-[6-chloro-2-(4-phenyl-1-piperazinyl)-4-quinazolinyl]-N-phenyl-,



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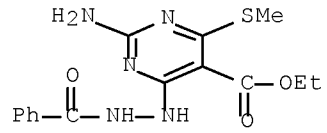
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Cocco, et al., Journal of Heterocyclic Chemistry (1992), 29(5), 1341-7, describing

RN 151049-63-7, 5-Pyrimidinecarboxylic acid, 2-amino-4-(2-benzoylhydrazino)-6-(methylthio)-, ethyl ester,



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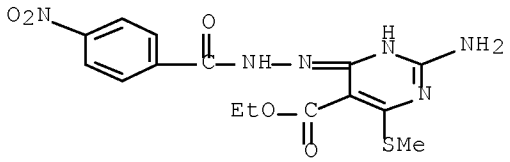
RN 151049-64-8, 5-Pyrimidinecarboxylic acid, 2-amino-4-(methylthio)-6-[2-(4-nitrobenzoyl)hydrazino]-, ethyl ester,



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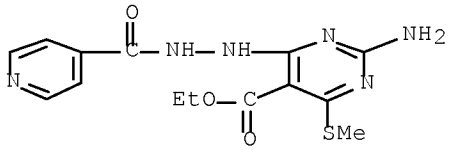
RN 151049-65-9, 5-Pyrimidinecarboxylic acid, 2-amino-4-(methylthio)-6-[2-(4-pyridinylcarbonyl)hydrazino]-, ethyl ester,



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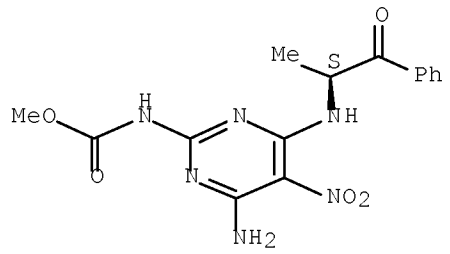
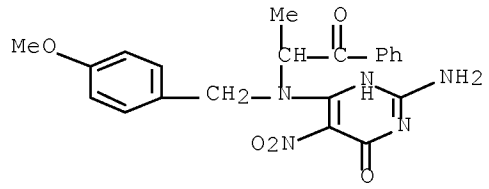
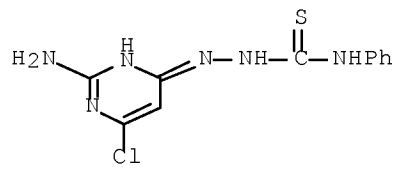
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Temple, et al., Journal of Medicinal Chemistry (1992), 35(26), 4809-12, describing RN 144694-28-0, Carbamic acid, [4-amino-6-[(1-methyl-2-oxo-2-phenylethyl)amino]-5-nitro-2-pyrimidinyl]-, methyl ester, (S)-,



Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Ogawa, et al., Chemical & Pharmaceutical Bulletin (1992), 40(5), 1315-17, describing RN 143101-67-1, 4(1H)-Pyrimidinone, 2-amino-6-[[(4-methoxyphenyl)methyl](1-methyl-2-oxo-2-phenylethyl)amino]-5-nitro-,

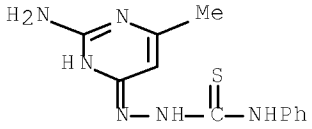


Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Seada, et al., Asian Journal of Chemistry (1992), 4(3), 604-14, Describing RN 142077-20-1, Hydrazinecarbothioamide, 2-(2-amino-6-chloro-4-pyrimidinyl)-N-phenyl-,



RN 142077-22-3, Hydrazinecarbothioamide, 2-(2-amino-6-methyl-4-pyrimidinyl)-N-

phenyl-,



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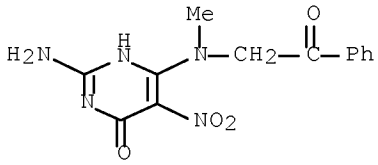
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Ogawa, et al., Chemical & Pharmaceutical Bulletin (1992), 40(2), 343-50, describing

RN 112698-39-2, 4(1H)-Pyrimidinone, 2-amino-6-[methyl(2-oxo-2-phenylethyl)amino]-5-nitro-,



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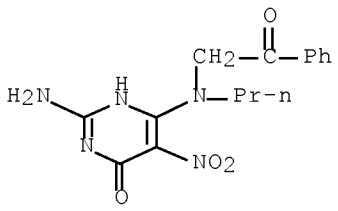
RN 112698-40-5, 4(1H)-Pyrimidinone, 2-amino-5-nitro-6-[(2-oxo-2-phenylethyl)propyl-amino]-,



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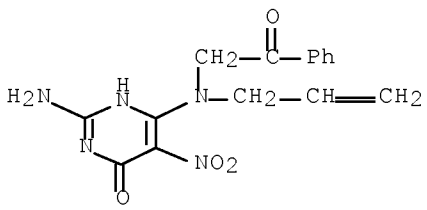
RN 112698-41-6, 4(1H)-Pyrimidinone, 2-amino-5-nitro-6-[(2-oxo-2-phenylethyl)-2-propenylamino]-,



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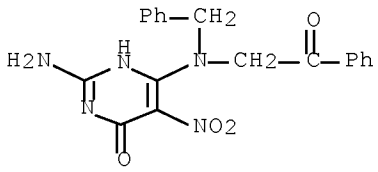
RN 112698-42-7, 4(1H)-Pyrimidinone, 2-amino-5-nitro-6-[(2-oxo-2-phenylethyl)-(phenylmethyl)amino]-,



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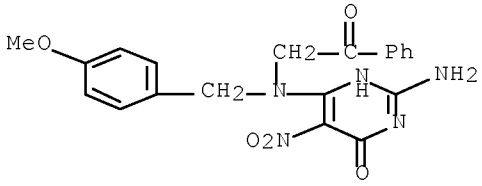
RN 112698-43-8, 4(1H)-Pyrimidinone, 2-amino-6-[[(4-methoxyphenyl)methyl](2-oxo-2-phenylethyl)amino]-5-nitro-,



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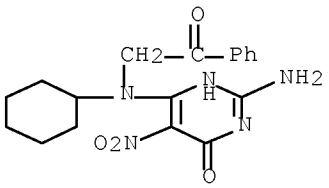
RN 112698-44-9, 4(1H)-Pyrimidinone, 2-amino-6-[cyclohexyl(2-oxo-2-phenylethyl)amino]-5-nitro-,



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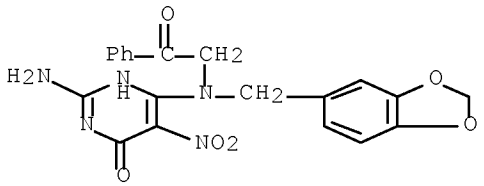
RN 117233-74-6, 4(1H)-Pyrimidinone, 2-amino-6-[(1,3-benzodioxol-5-ylmethyl)(2-oxo-2-

phenylethyl)amino]-5-nitro-,



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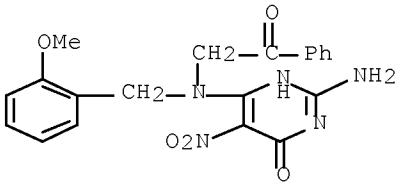
RN 117233-75-7, 4(1H)-Pyrimidinone, 2-amino-6-[[(2-methoxyphenyl)methyl](2-oxo-2-phenylethyl)amino]-5-nitro-,



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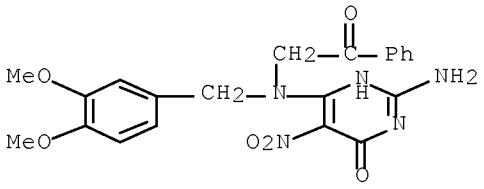
RN 117233-76-8, 4(1H)-Pyrimidinone, 2-amino-6-[[(3,4-dimethoxyphenyl)methyl](2-oxo-2-phenylethyl)amino]-5-nitro-,



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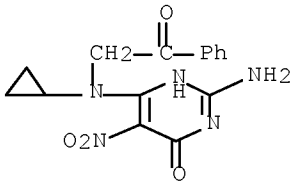
RN 141213-97-0, 4(1H)-Pyrimidinone, 2-amino-6-[cyclopropyl(2-oxo-2-phenylethyl)amino]-5-nitro-,



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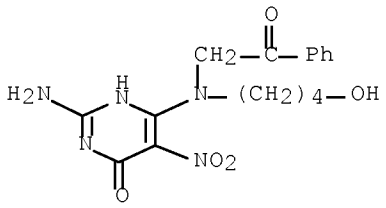
RN 141228-44-6, 4(1H)-Pyrimidinone, 2-amino-6-[(4-hydroxybutyl)(2-oxo-2-

phenylethyl)amino]-5-nitro-,



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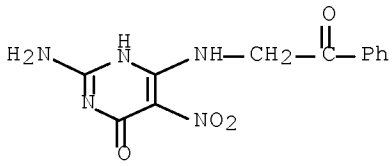
RN 33344-07-9, 4(1H)-Pyrimidinone, 2-amino-5-nitro-6-[(2-oxo-2-phenylethyl)amino]-,



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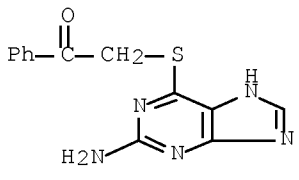
having antileukemic activity.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Grinter, et al., US 5017701, issued 19910521, describing

RN 98018-39-4, Ethanone, 2-[(2-amino-1H-purin-6-yl)thio]-1-phenyl-,



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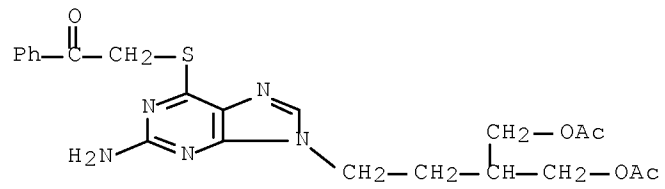
RN 128139-36-6, Ethanone, 2-[[9-[4-(acetyloxy)-3-[(acetyloxy)methyl]butyl]-2-amino-9H-purin-6-yl]thio]-1-phenyl-,



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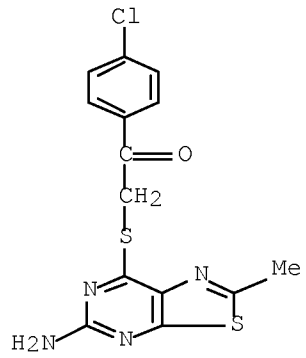
as virucides.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Harnden, et al., Australian Journal of Chemistry (1990), 43(1), 55-62, describing

RN 127726-74-3, Ethanone, 2-[(5-amino-2-methylthiazolo[5,4-d]pyrimidin-7-yl)thio]-1-(4-chlorophenyl)-,



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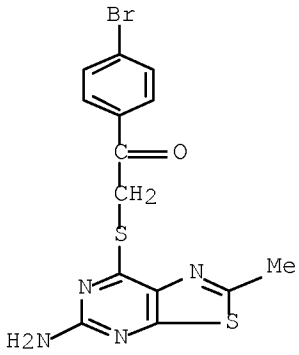
RN 127726-75-4, Ethanone, 2-[(5-amino-2-methylthiazolo[5,4-d]pyrimidin-7-yl)thio]-1-(4-bromophenyl)-,



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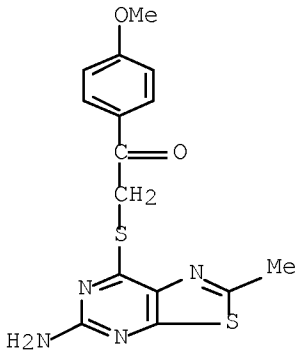
RN 127726-76-5, Ethanone, 2-[(5-amino-2-methylthiazolo[5,4-d]pyrimidin-7-yl)thio]-1-(4-methoxyphenyl)-,



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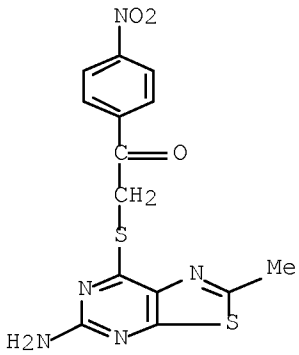
RN 127726-77-6, Ethanone, 2-[(5-amino-2-methylthiazolo[5,4-d]pyrimidin-7-yl)thio]-1-(4-nitrophenyl)-,



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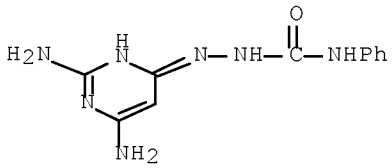
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Youssef, Egyptian Journal of Pharmaceutical Sciences (1989), 30(1-4), 465-72, describing

RN 127152-42-5, Hydrazinecarboxamide, 2-(2,6-diamino-4-pyrimidinyl)-N-phenyl-,



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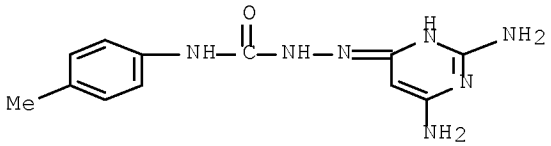
RN 127152-43-6, Hydrazinecarboxamide, 2-(2,6-diamino-4-pyrimidinyl)-N-(4-methylphenyl)-,



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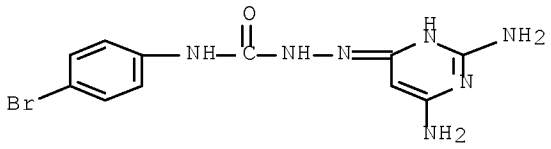
RN 127152-44-7, Hydrazinecarboxamide, N-(4-bromophenyl)-2-(2,6-diamino-4-pyrimidinyl)-,



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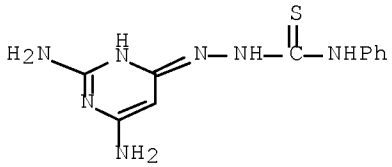
RN 127152-45-8, Hydrazinecarbothioamide, 2-(2,6-diamino-4-pyrimidinyl)-N-phenyl-,

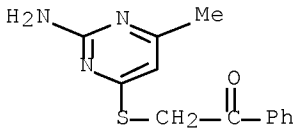


,

as antineoplastic agents.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Hurst, et al., Australian Journal of Chemistry (1988), 41(8), 1209-19, describing

RN 105402-11-7, Ethanone, 2-[(2-amino-6-methyl-4-pyrimidinyl)thio]-1-phenyl-,



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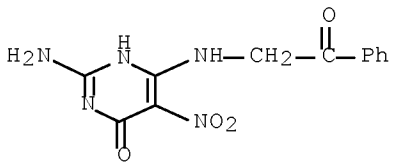
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Bailey, et al., Biochemistry (1989), 28(2), 494-504, describing

RN 33344-07-9, 4(1H)-Pyrimidinone, 2-amino-5-nitro-6-[(2-oxo-2-phenylethyl)amino]-,



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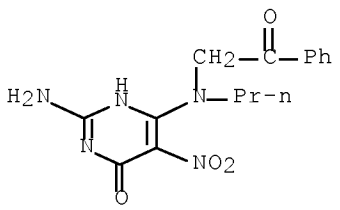
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Fujii, et al., JP 63122684, published 19880526, describing

RN 112698-40-5, 4(1H)-Pyrimidinone, 2-amino-5-nitro-6-[(2-oxo-2-phenylethyl)propylamino]-,



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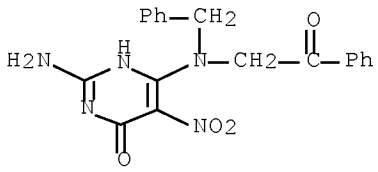
RN 112698-42-7, 4(1H)-Pyrimidinone, 2-amino-5-nitro-6-[(2-oxo-2-phenylethyl)(phenylmethyl)amino]-,



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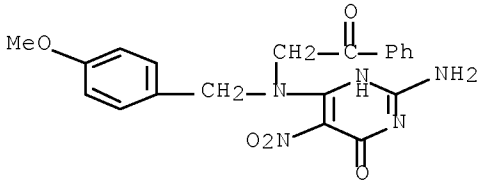
RN 112698-43-8, 4(1H)-Pyrimidinone, 2-amino-6-[[(4-methoxyphenyl)methyl](2-oxo-2-phenylethyl)amino]-5-nitro-,



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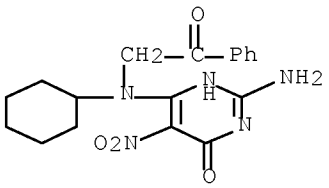
RN 112698-44-9, 4(1H)-Pyrimidinone, 2-amino-6-[cyclohexyl(2-oxo-2-phenylethyl)amino]-5-nitro-,



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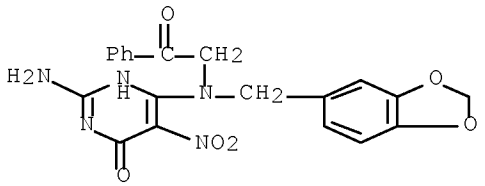
RN 117233-74-6, 4(1H)-Pyrimidinone, 2-amino-6-[(1,3-benzodioxol-5-ylmethyl)(2-oxo-2-

phenylethyl)amino]-5-nitro-,



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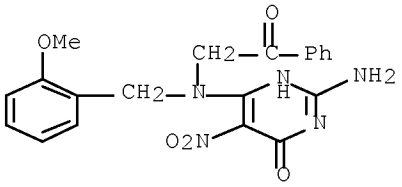
RN 117233-75-7, 4(1H)-Pyrimidinone, 2-amino-6-[[(2-methoxyphenyl)methyl](2-oxo-2-phenylethyl)amino]-5-nitro-,



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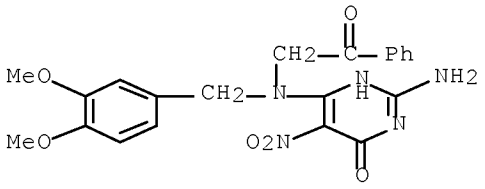
RN 117233-76-8, 4(1H)-Pyrimidinone, 2-amino-6-[[(3,4-dimethoxyphenyl)methyl](2-oxo-2-phenylethyl)amino]-5-nitro-,



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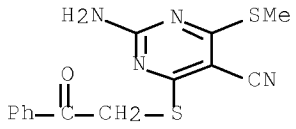
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Sharanin, et al., Khimiya Geterotsiklicheskikh Soedinenii (1987), (10), 1377-84, describing RN 114460-80-9, 5-Pyrimidinecarbonitrile, 2-amino-4-(methylthio)-6-[(2-oxo-2-phenylethyl)thio]-,



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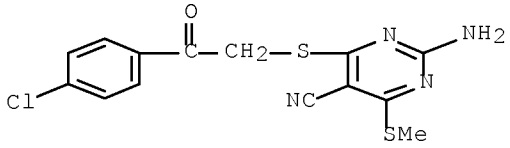
RN 114460-81-0, 5-Pyrimidinecarbonitrile, 2-amino-4-[[2-(4-chlorophenyl)-2-oxoethyl]thio]-6-(methylthio)-,



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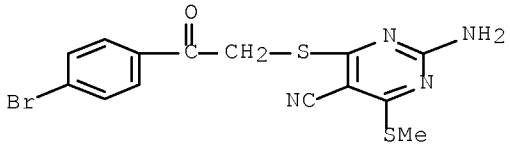
RN 114460-82-1, 5-Pyrimidinecarbonitrile, 2-amino-4-[[2-(4-bromophenyl)-2-oxoethyl]thio]-6-(methylthio)-,



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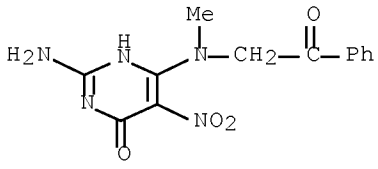
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Nohara, et al., Tetrahedron Letters (1987), 28(12), 1287-90, describing,

RN 112698-39-2, 4(1H)-Pyrimidinone, 2-amino-6-[methyl(2-oxo-2-phenylethyl)amino]-5-nitro-,



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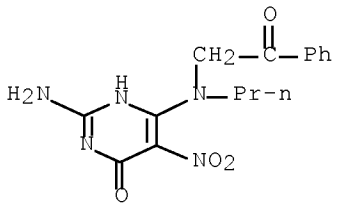
RN 112698-40-5, 4(1H)-Pyrimidinone, 2-amino-5-nitro-6-[(2-oxo-2-

phenylethyl)propylamino]-,



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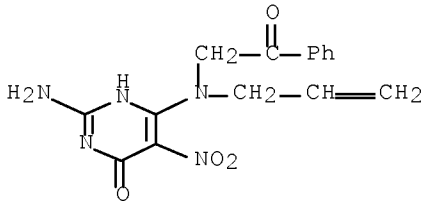
RN 112698-41-6, 4(1H)-Pyrimidinone, 2-amino-5-nitro-6-[(2-oxo-2-phenylethyl)-2-propenylamino]-,



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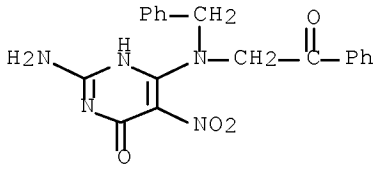
RN 112698-42-7, 4(1H)-Pyrimidinone, 2-amino-5-nitro-6-[(2-oxo-2-phenylethyl)(phenylmethyl)amino]-,



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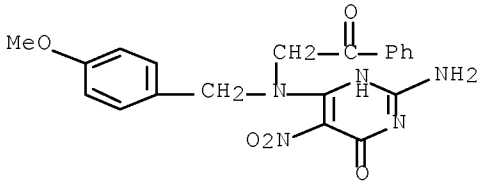
RN 112698-43-8, 4(1H)-Pyrimidinone, 2-amino-6-[[(4-methoxyphenyl)methyl](2-oxo-2-phenylethyl)amino]-5-nitro-,



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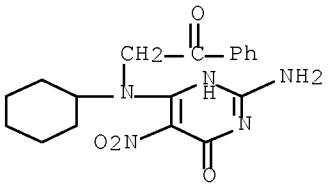
RN 112698-44-9, 4(1H)-Pyrimidinone, 2-amino-6-[cyclohexyl(2-oxo-2-phenylethyl)amino]-5-nitro-,



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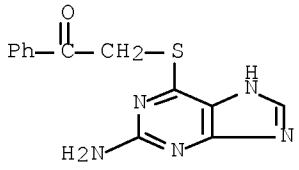
having in vitro activity against L5178Y leukemia.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Dunaev, et al., Khimiko-Farmatsevticheskii Zhurnal (1986), 20(10), 1198-202, describing

RN 98018-39-4, Ethanone, 2-[(2-amino-1H-purin-6-yl)thio]-1-phenyl-,



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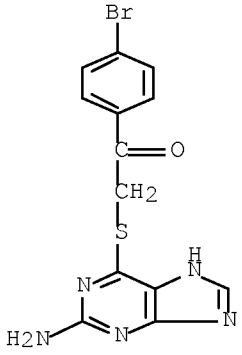
RN 100398-10-5, Ethanone, 2-[(2-amino-1H-purin-6-yl)thio]-1-(4-bromophenyl)-,



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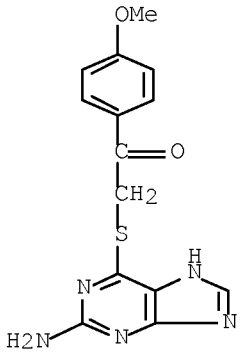
RN 106609-71-6, Ethanone, 2-[(2-amino-1H-purin-6-yl)thio]-1-(4-methoxyphenyl)-,



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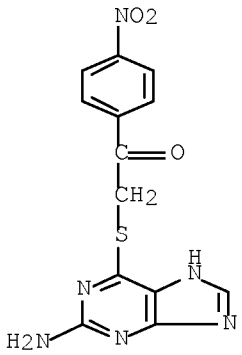
RN 106609-72-7, Ethanone, 2-[(2-amino-1H-purin-6-yl)thio]-1-(4-nitrophenyl)-,

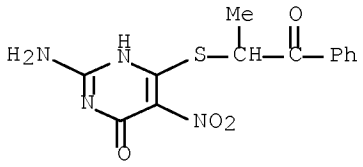


,

effective against lymphocytes, monocytes, neutrophils, and eosinophils.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Nair, et al., Journal of Organic Chemistry (1981), 46(16), 3354-7, describing

RN 77903-11-8, 4(1H)-Pyrimidinone, 2-amino-6-[(1-methyl-2-oxo-2-phenylethyl)thio]-5-nitro-,



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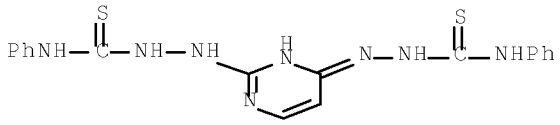
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Vasilev, et al., Doklady Bolgarskoi Akademii Nauk (1980), 33(6), 849-51, describing

RN 77112-85-7, Hydrazinecarbothioamide, 2,2'-(2,4-pyrimidinediyl)bis[N-phenyl-,



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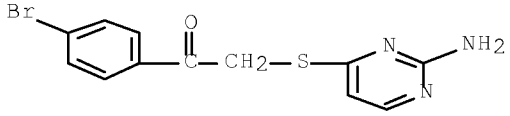
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Roth, et al., Journal of Organic Chemistry (1980), 45(18), 3651-7, describing

RN 74195-52-1, Ethanone, 2-[(2-amino-4-pyrimidinyl)thio]-1-(4-bromophenyl)-,



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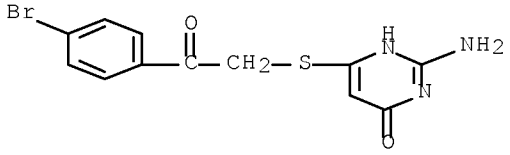
RN 74195-53-2, 4(1H)-Pyrimidinone, 2-amino-6-[[2-(4-bromophenyl)-2-oxoethyl]thio]-,



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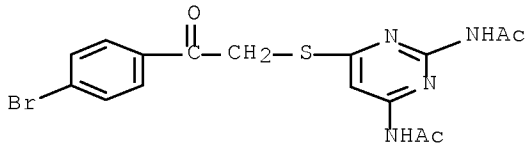
RN 74195-54-3, Acetamide, N,N'-[6-[[2-(4-bromophenyl)-2-oxoethyl]thio]-2,4-pyrimidinediyl]bis-,



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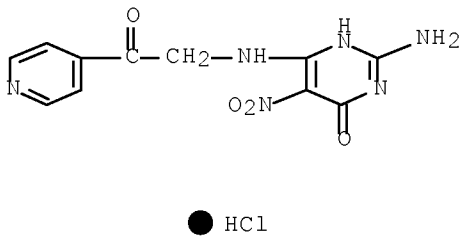
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Walsh, et al., Journal of Chemical Research, Synopses (1980), (2), 38-9, describing

RN 74783-38-3, 4(1H)-Pyrimidinone, 2-amino-5-nitro-6-[[2-oxo-2-(4-pyridinyl)ethyl]amino]-, monohydrochloride,



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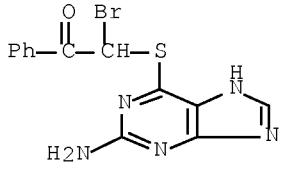
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Kikuchi, et al., DE 2547691, published 19760429, describing

RN 61631-52-5, Ethanone, 2-[(2-amino-1H-purin-6-yl)thio]-2-bromo-1-phenyl-,



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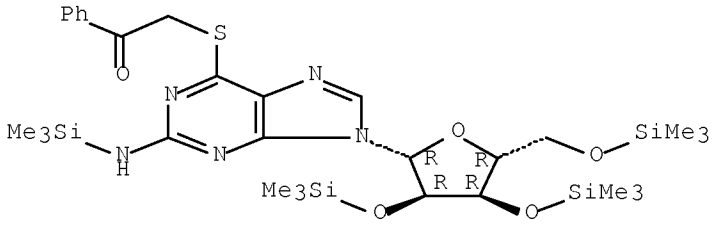
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Vorbrueggen, et al., Angewandte Chemie (1976), 88(21), 724-5, describing

RN 60363-87-3, Guanosine, 6-S-(2-oxo-2-phenylethyl)-6-thio-N-(trimethylsilyl)-2',3',5'-tris-O-(trimethylsilyl)-,



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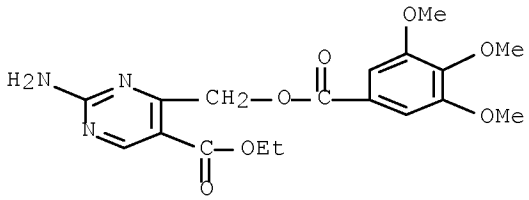
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Takai, et al., JP 51052184, published 19760508, describing

RN 60819-66-1, 5-Pyrimidinecarboxylic acid, 2-amino-4-[[(3,4,5-trimethoxybenzoyl)oxy]methyl]-, ethyl ester,



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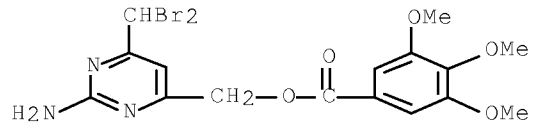
RN 60819-67-2, Benzoic acid, 3,4,5-trimethoxy-, [2-amino-6-(dibromomethyl)-4-pyrimidinyl]methyl ester,

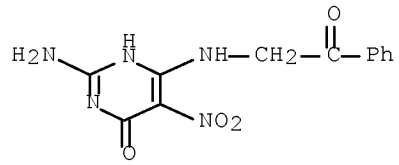


,

having coronary vasodilating activity.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Pfleiderer, et al., Chemische Berichte (1971), 104(7), 2293-2312, describing

RN 33344-07-9, 4(1H)-Pyrimidinone, 2-amino-5-nitro-6-[(2-oxo-2-phenylethyl)amino]-,



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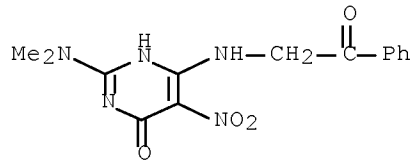
RN 33344-09-1, 4(3H)-Pyrimidinone, 2-(dimethylamino)-5-nitro-6-(phenacylamino)-,



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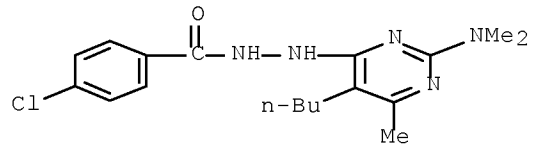
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Imperial Chemical Industries Ltd., US 3670077, issued 19720613, described

RN 27499-93-0, Benzoic acid, p-chloro-, 2-[5-butyl-2-(dimethylamino)-6-methyl-4-pyrimidinyl]hydrazide,



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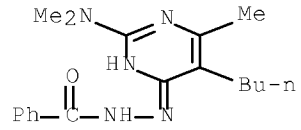
RN 27575-84-4, Benzoic acid, 2-[5-butyl-2-(dimethylamino)-6-methyl-4-pyrimidinyl]hydrazide,



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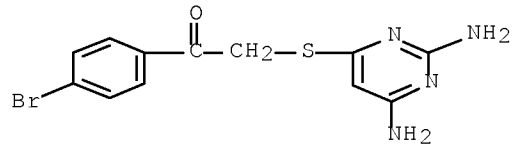
As plant fungicides and insecticides.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Roth, US 3470183, issued 19690930, describing

RN 18620-81-0, Acetophenone, 4'-bromo-2-[(2,6-diamino-4-pyrimidinyl)thio]-,



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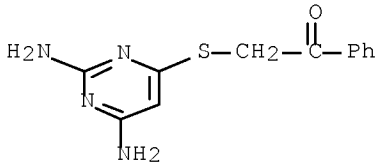
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Roth, Journal of Medicinal Chemistry (1969), 12(2), 227-32, describing

RN 21863-70-7, Acetophenone, 2-[(2,6-diamino-4-pyrimidinyl)thio]-,



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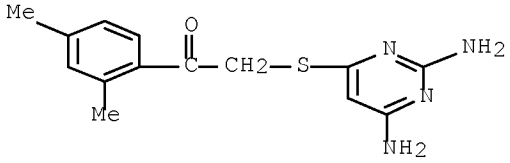
RN 21863-71-8, Acetophenone, 2-[(2,6-diamino-4-pyrimidinyl)thio]-2',4'-dimethyl-,



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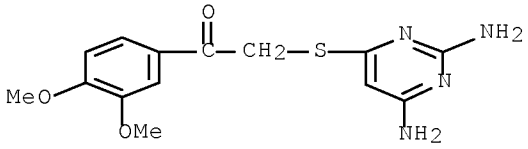
RN 21863-72-9, Acetophenone, 2-[(2,6-diamino-4-pyrimidinyl)thio]-3',4'-dimethoxy-,



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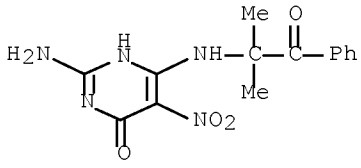
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Pfleiderer, et al., Chemische Berichte (1966), 99(9), 3008-21, describing

RN 10201-20-4, 4(3H)-Pyrimidinone, 2-amino-6-[(α,α-dimethylphenacyl)amino]-5-nitro-,



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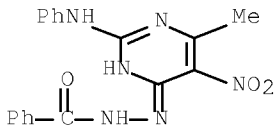
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Polya, et al., Journal

of the Chemical Society (1964), (Dec.), 4986-92, describing

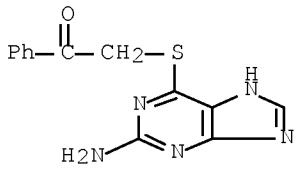
RN 1439-86-7, Benzoic acid, 2-(2-anilino-6-methyl-5-nitro-4-pyrimidinyl)hydrazide,



.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Noell, et al., Journal of Medicinal & Pharmaceutical Chemistry (1962), 5, 1074-85, describing

RN 98018-39-4, Ethanone, 2-[(2-amino-1H-purin-6-yl)thio]-1-phenyl-,



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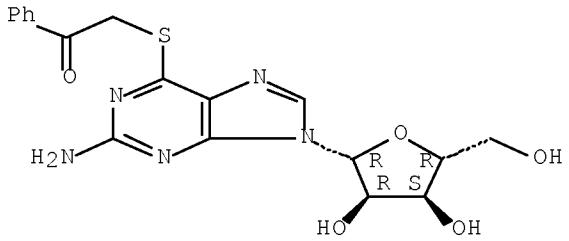
RN 93871-94-4, Acetophenone, 2-[(2-amino-9-β-D-ribofuranosyl-9H-purin-6-yl)thio]-,



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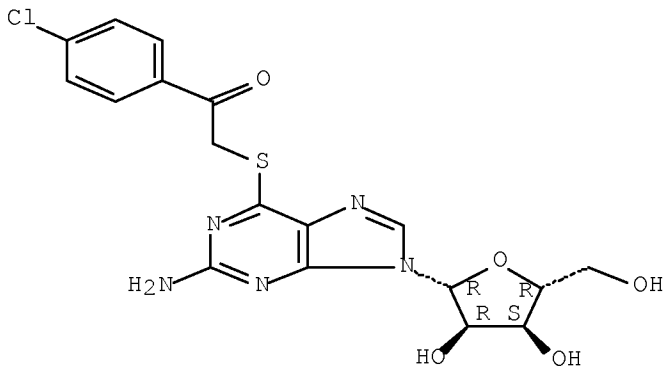
RN 95125-27-2, Acetophenone, 2-[(2-amino-9-β-D-ribofuranosyl-9H-purin-6-yl)thio]-4'-chloro-,

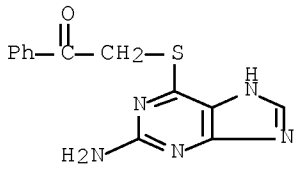


,

having antitumor activity.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Davis, et al., Journal of the American Chemical Society (1960), 82, 2633-40, descreibing

RN 98018-39-4, Ethanone, 2-[(2-amino-1H-purin-6-yl)thio]-1-phenyl-,



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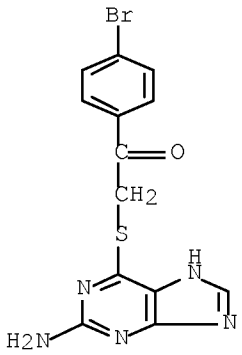
RN 100398-10-5, Ethanone, 2-[(2-amino-1H-purin-6-yl)thio]-1-(4-bromophenyl)-,



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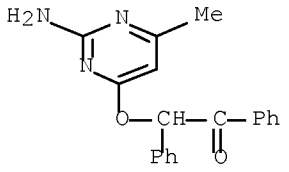
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Bell, et al., Journal of the American Chemical Society (1960), 82, 1469-71, describing

RN 102023-08-5, Acetophenone, 2-(2-amino-6-methyl-4-pyrimidinyloxy)-2-phenyl-,



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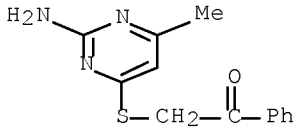
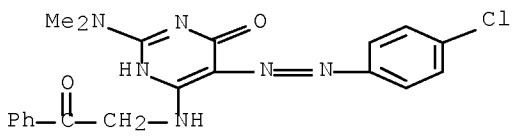
RN 105402-11-7, Ethanone, 2-[(2-amino-6-methyl-4-pyrimidinyl)thio]-1-phenyl-,



.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Boon, et al., GB 763041, published 19561205, describing

RN 103388-37-0, Acetophenone, 2-[[5-(p-chlorophenylazo)-2-dimethylamino-6-hydroxy-4-pyrimidinyl]amino]-,



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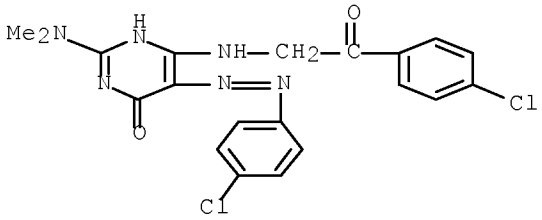
RN 103387-84-4, Acetophenone, 4'-chloro-2-[[5-(p-chlorophenylazo)-2-dimethylamino-

6-hydroxy-4-pyrimidinyl]amino]-,



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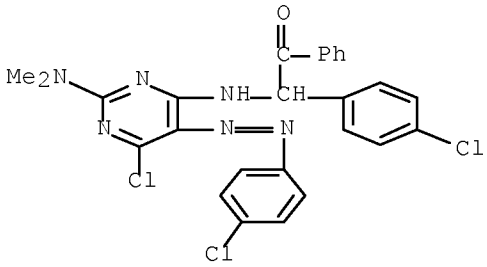
RN 103757-94-4, Acetophenone, 2-[[6-chloro-5-(p-chlorophenylazo)-2-dimethylamino-4-pyrimidinyl]amino]-2-(p-chlorophenyl)-,



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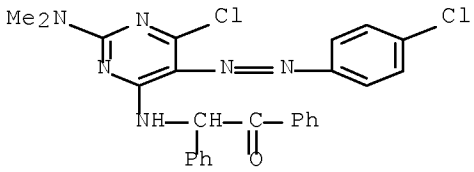
RN 103758-00-5, Acetophenone, 2-[[6-chloro-5-(p-chlorophenylazo)-2-dimethylamino-4-pyrimidinyl]amino]-2-phenyl-,



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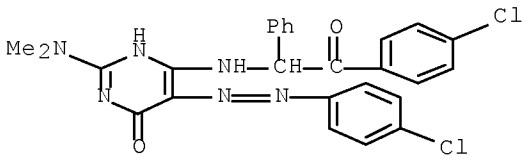
RN 103758-01-6, Acetophenone, 4'-chloro-2-[[5-(p-chlorophenylazo)-2-dimethylamino-6-hydroxy-4-pyrimidinyl]amino]-2-phenyl-,



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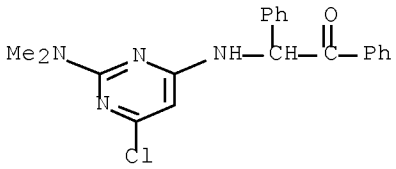
RN 109694-08-8, Acetophenone, 2-[(6-chloro-2-dimethylamino-4-pyrimidinyl)amino]-2-phenyl-,



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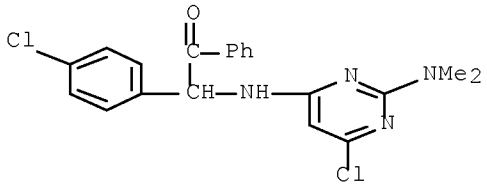
RN 109804-94-6, Acetophenone, 2-[(6-chloro-2-dimethylamino-4-pyrimidinyl)amino]-2-(p-chlorophenyl)-,



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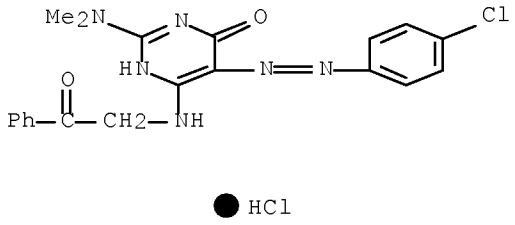
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Boon, et al., Journal of the Chemical Society (1957) 2146-58, describing

RN 112625-11-3, Acetophenone, 2-[[5-(p-chlorophenylazo)-2-dimethylamino-6-hydroxy-4-pyrimidinyl]amino]-, hydrochloride,



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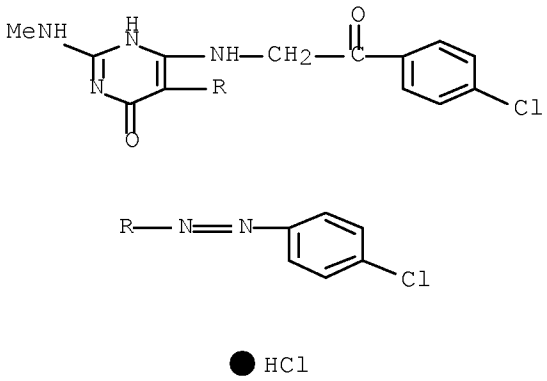
RN 114331-27-0, Acetophenone, 4'-chloro-2-[[5-(p-chlorophenylazo)-6-hydroxy-2-methylamino-4-pyrimidinyl]amino]-, hydrochloride,



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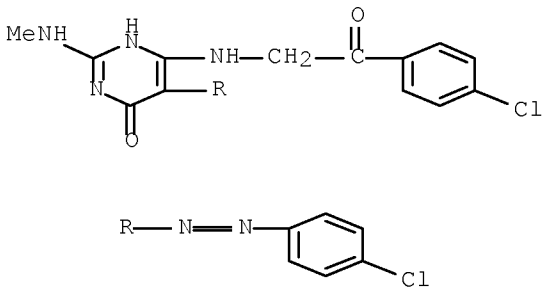
RN 103155-50-6, Acetophenone, 4'-chloro-2-[[5-(p-chlorophenylazo)-6-hydroxy-2-methylamino-4-pyrimidinyl]amino]-,



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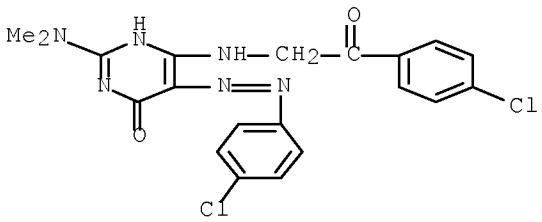
RN 103387-84-4, Acetophenone, 4'-chloro-2-[[5-(p-chlorophenylazo)-2-dimethylamino-6-hydroxy-4-pyrimidinyl]amino]-,



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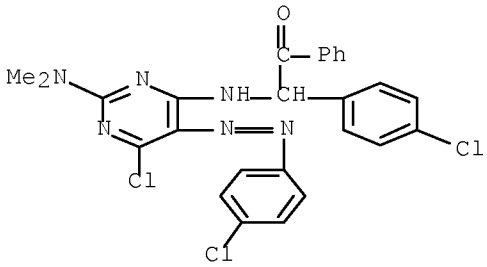
RN 103757-94-4, Acetophenone, 2-[[6-chloro-5-(p-chlorophenylazo)-2-dimethylamino-4-pyrimidinyl]amino]-2-(p-chlorophenyl)-,



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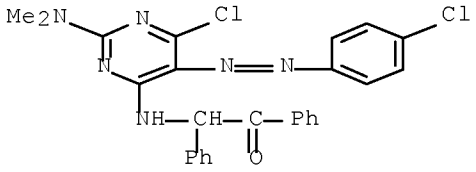
RN 103758-00-5, Acetophenone, 2-[[6-chloro-5-(p-chlorophenylazo)-2-dimethylamino-4-pyrimidinyl]amino]-2-phenyl-,



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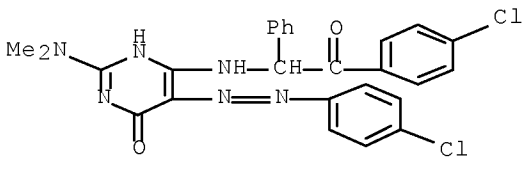
RN 103758-01-6, Acetophenone, 4'-chloro-2-[[5-(p-chlorophenylazo)-2-dimethylamino-6-hydroxy-4-pyrimidinyl]amino]-2-phenyl-,



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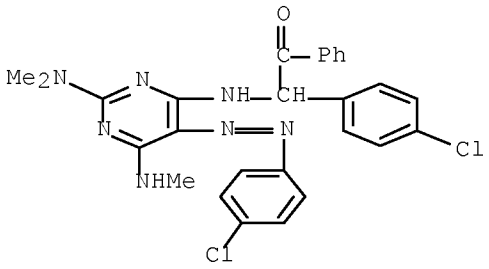
RN 104095-83-2, Acetophenone, 2-(p-chlorophenyl)-2-[[5-(p-chlorophenylazo)-2-dimethylamino-6-methylamino-4-pyrimidinyl]amino]-,



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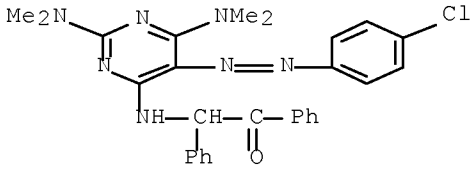
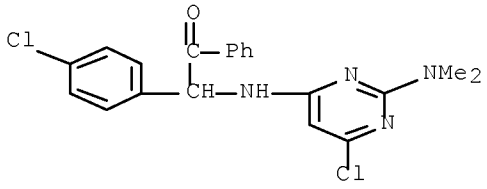
RN 104297-28-1, Acetophenone, 2-[[5-(p-chlorophenylazo)-2,6-bis(dimethylamino)-4-pyrimidinyl]amino]-2-phenyl-,



,

RN 109804-94-6, Acetophenone, 2-[(6-chloro-2-dimethylamino-4-pyrimidinyl)amino]-2-(p-chlorophenyl)-,



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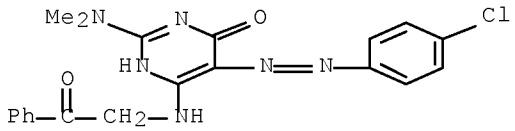
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Kilroe Smith, et al., Tetrahedron (1957), 1, 38-44, describing

RN 103388-37-0, Acetophenone, 2-[[5-(p-chlorophenylazo)-2-dimethylamino-6-hydroxy-

4-pyrimidinyl]amino]-,



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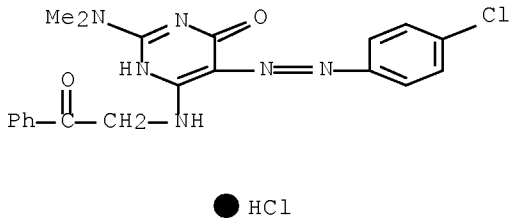
RN 112625-11-3, Acetophenone, 2-[[5-(p-chlorophenylazo)-2-dimethylamino-6-hydroxy-4-pyrimidinyl]amino]-, hydrochloride,



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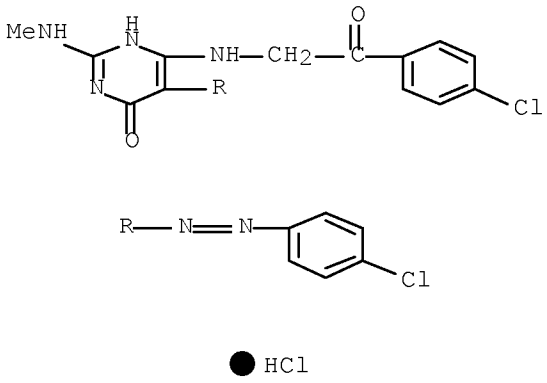
RN 114331-27-0, Acetophenone, 4'-chloro-2-[[5-(p-chlorophenylazo)-6-hydroxy-2-methylamino-4-pyrimidinyl]amino]-, hydrochloride,



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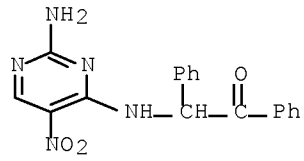
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Boon, et al., Journal of the Chemical Society (1951) 591-6, describing

RN 857560-70-4, Acetophenone, 2-[2-amino-5-nitro-4-pyrimidinylamino]-2-phenyl-,



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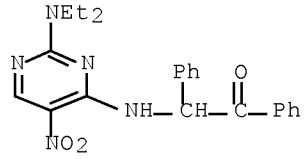
RN 857564-69-3, Acetophenone, 2-[2-diethylamino-5-nitro-4-pyrimidinylamino]-2-phenyl-,



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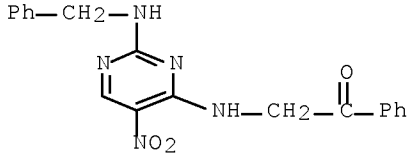
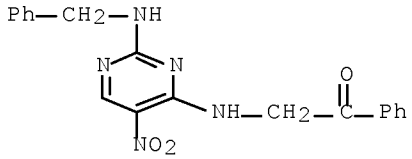
RN 875819-80-0, Acetophenone, 2-(2-benzylamino-5-nitro-4-pyrimidinylamino)-,



.

Claims 1- 4 and 35 are rejected under 35 USC 102(b) over Boon, et al., GB 635582, published 19500412, describing

RN 875819-80-0, Acetophenone, 2-(2-benzylamino-5-nitro-4-pyrimidinylamino)-,



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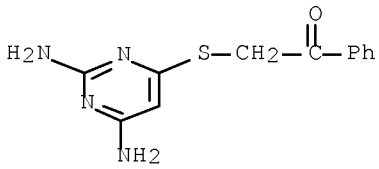
Claims 1- 4 and 35 are rejected under 35 USC 102(b) over D'Alelio, et al., US 2354505, issued 19440725, describing

RN 21863-70-7, Acetophenone, 2-[(2,6-diamino-4-pyrimidinyl)thio]-,



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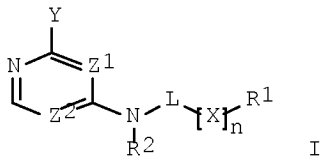
Claims 1-4 and 35 are rejected under 35 USC 102(e) over Dugar, et al., WO 2005033072, entitled to the date of 20030930, describing



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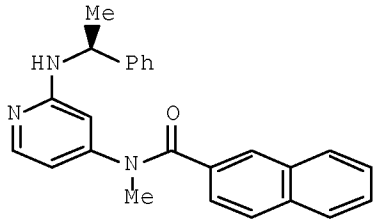
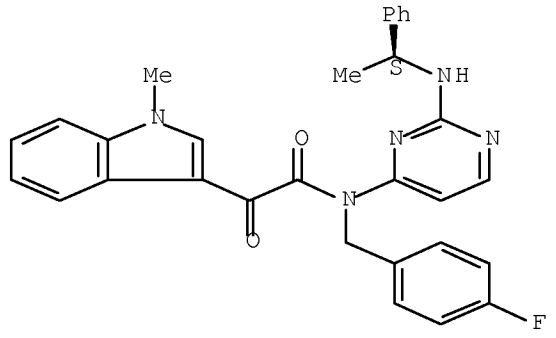


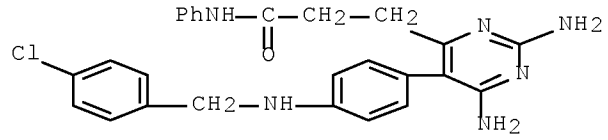
II

In compounds I, R1 = alkyl, cycloalkyl, heterocycloalkyl, aryl; L = CO, SO2; X = O, CO, (un)substituted CH2, NH; n = 0-3; R2 = H, alkyl, aryl, etc.; Y = (un)substituted NH2, OH; one of Z1 and Z2 = CH, and the other is either CH or N]. Also described is RN 849745-68-2, 1H-Indole-3-acetamide, N-[(4-fluorophenyl)methyl]-1-methyl-α-oxo-N- [2-[[(1S)-1-phenylethyl]amino]-4-pyrimidinyl]-,



. The compounds are useful for inhibiting p38 kinase.

Claims 1-4 and 35 are rejected under 35 USC 102(e) over Kosogof, et al., WO 2005030734, entitled to the date of 20030926, describing RN 848666-32-0, 4-Pyrimidinepropanamide, 2,6-diamino-5-[4-[[(4-chlorophenyl)methyl]amino]phenyl]-N-phenyl-,



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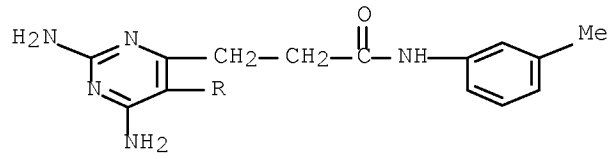
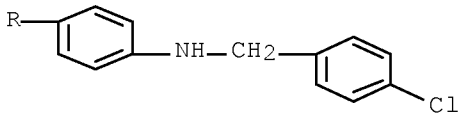
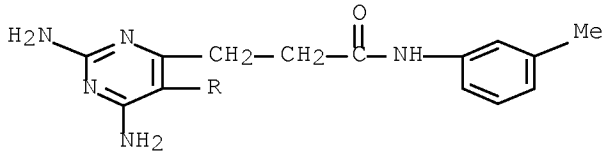
RN 848666-42-2, 4-Pyrimidinepropanamide, 2,6-diamino-5-[4-[[(4-chlorophenyl)methyl]amino]phenyl]-N-(3-methylphenyl)-,

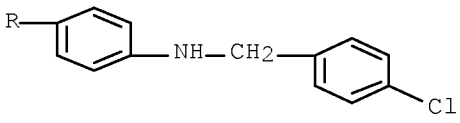




,

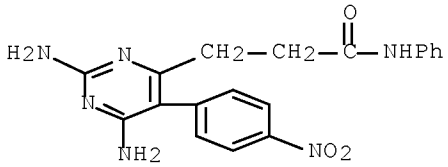
RN 848666-43-3, 4-Pyrimidinepropanamide, 2,6-diamino-5-[4-[[(4-chlorophenyl)methyl]amino]phenyl]-N-(3-methylphenyl)-, mono(trifluoroacetate),





,

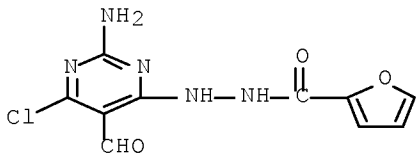
RN 848666-33-1, 4-Pyrimidinepropanamide, 2,6-diamino-5-(4-nitrophenyl)-N-phenyl-,



, useful as ghrelin receptor modulators.

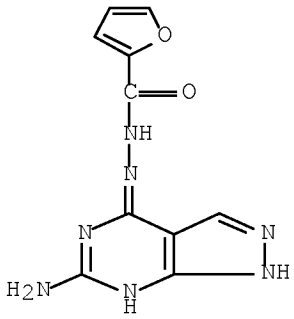
Claims 1- 4 and 35 are rejected under 35 USC 102(e) over Boyle, et al., WO 2003048165, entitled to the date of 20011130, describing

RN 377729-80-1,2-Furancarboxylic acid, 2-(2-amino-6-chloro-5-formyl-4-pyrimidinyl)hydrazide,



,

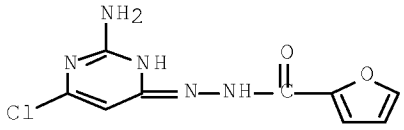
RN 377729-81-2, 2-Furancarboxylic acid, 2-(6-amino-1H-pyrazolo[3,4-d]pyrimidin-4-yl)hydrazide,



, useful as as A3 adenosine receptor antagonists.

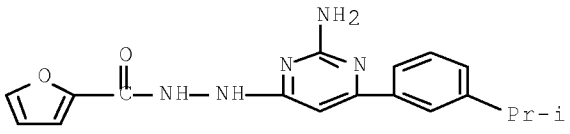
Claims 1- 4 and 35 are rejected under 35 USC 102(e) over Matasi, et al., WO 2003048164, entitled to the date of 20011130, describing

RN 394652-85-8, 2-Furancarboxylic acid, 2-(2-amino-6-chloro-4-pyrimidinyl)hydrazide,



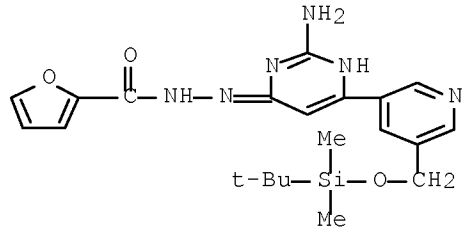
,

RN 540752-76-9, 2-Furancarboxylic acid, 2-[2-amino-6-[3-(1-methylethyl)phenyl]-4-pyrimidinyl]hydrazide,



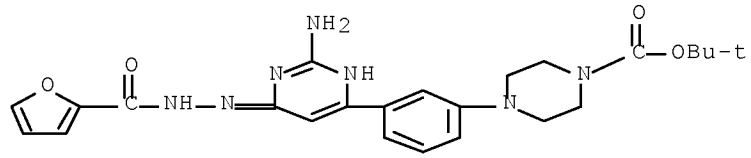
,

RN 540752-84-9, 2-Furancarboxylic acid, 2-[2-amino-6-[5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]-3-pyridinyl]-4-pyrimidinyl]hydrazide,



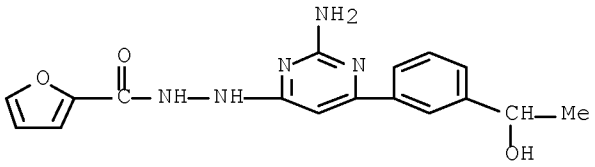
RN 540752-89-4 ZCAPLUS

CN 1-Piperazinecarboxylic acid, 4-[3-[2-amino-6-[2-(2-furanylcarbonyl)hydrazino]-4-pyrimidinyl]phenyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



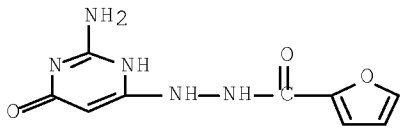
RN 540752-95-2 ZCAPLUS

CN 2-Furancarboxylic acid, 2-[2-amino-6-[3-(1-hydroxyethyl)phenyl]-4-pyrimidinyl]hydrazide (CA INDEX NAME)



RN 540752-98-5 ZCAPLUS

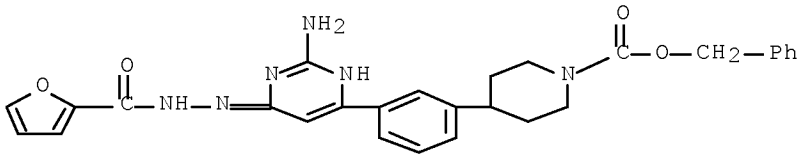
CN 2-Furancarboxylic acid, 2-(2-amino-1,6-dihydro-6-oxo-4-pyrimidinyl)hydrazide (CA INDEX NAME)



RN 540753-07-9 ZCAPLUS

CN 1-Piperidinecarboxylic acid, 4-[3-[2-amino-6-[2-(2-furanylcarbonyl)hydrazino]-4-pyrimidinyl]phenyl]-, phenylmethyl ester

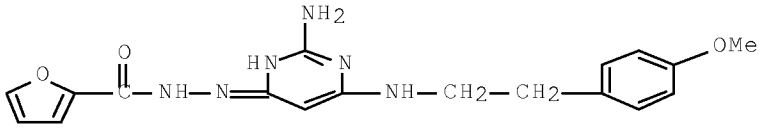
(9CI) (CA INDEX NAME)



, useful as adenosine A2a receptor antagonists.

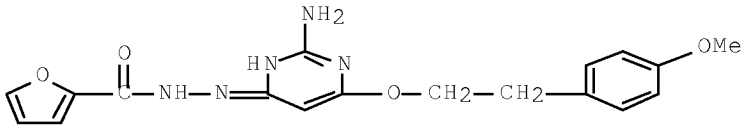
Claims 1- 4 and 35 are rejected under 35 USC 102(e) over Neustadt, et al., WO 2003048163, entitled to the date of 20011130, describing

RN 539822-91-8, 2-Furancarboxylic acid, 2-[2-amino-6-[[2-(4-methoxyphenyl)ethyl]amino]-4-pyrimidinyl]hydrazide,



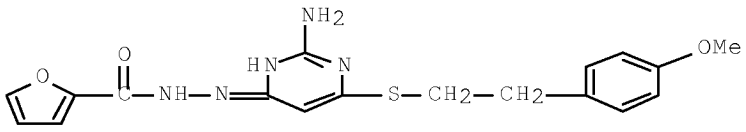
,

RN 539822-92-9, 2-Furancarboxylic acid, 2-[2-amino-6-[2-(4-methoxyphenyl)ethoxy]-4-pyrimidinyl]hydrazide,



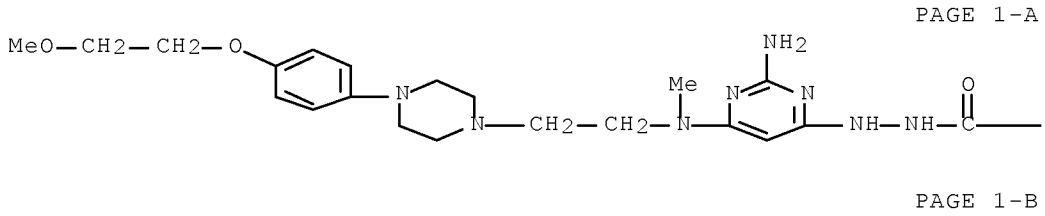
,

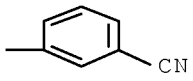
RN 539822-94-1, 2-Furancarboxylic acid, 2-[2-amino-6-[[2-(4-methoxyphenyl)ethyl]thio]-4-pyrimidinyl]hydrazide,



,

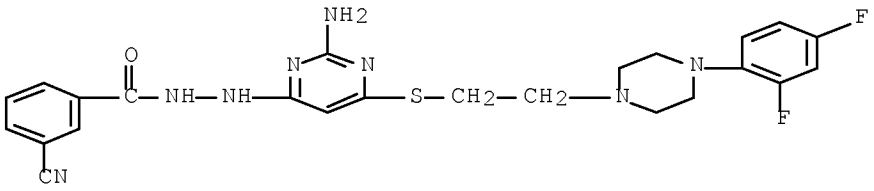
RN 539822-95-2, Benzoic acid, 3-cyano-, 2-[2-amino-6-[[2-[4-[4-(2-methoxyethoxy)phenyl]-1-piperazinyl]ethyl]methylamino]-4-pyrimidinyl]hydrazide,





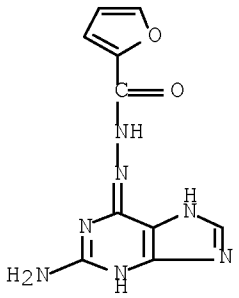
,

RN 539822-96-3, Benzoic acid, 3-cyano-, 2-[2-amino-6-[[2-[4-(2,4-difluorophenyl)-1-piperazinyl]ethyl]thio]-4-pyrimidinyl]hydrazide,



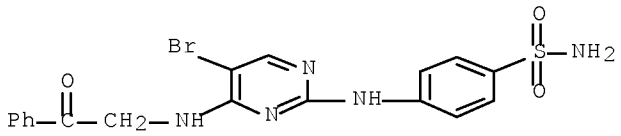
, useful as adenosine A2a receptor antagonists.

Claims 1- 4 and 35 are rejected under 35 USC 102(e) over Tulshian, et al., WO 2003032996, entitled to the date of 20011015, describing RN 515160-60-8, 2-Furancarboxylic acid, 2-(2-amino-1H-purin-6-yl)hydrazide,



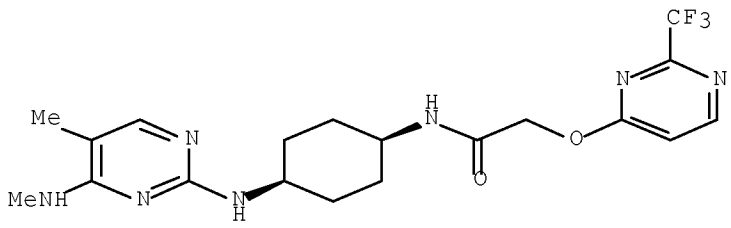
, useful as adenosine A2a receptor antagonists.

Claims 1- 4 and 35 are rejected under 35 USC 102(e) over Brumby, et al., WO 2002096888, entitled to the date of 20020523, describing RN 477590-22-0, Benzenesulfonamide, 4-[[5-bromo-4-[(2-oxo-2-phenylethyl)amino]-2-pyrimidinyl]amino]-,



, as a CDK inhibitor.

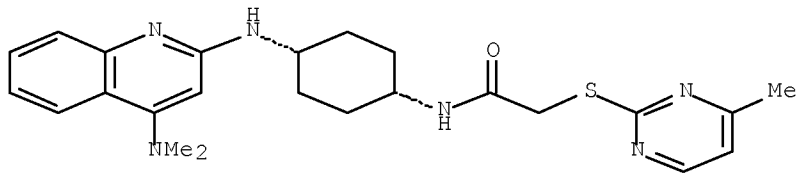
Claims 1- 4 and 35 are rejected under 35 USC 102(e) over Sekiguchi, et al., WO 2004087669, entitled to the date of March 31, 2003, describing RN 771557-49-4, Acetamide, N-[cis-4-[[5-methyl-4-(methylamino)-2-pyrimidinyl]amino]cyclohexyl]-2-[[2-(trifluoromethyl)-4-pyrimidinyl]oxy]-,



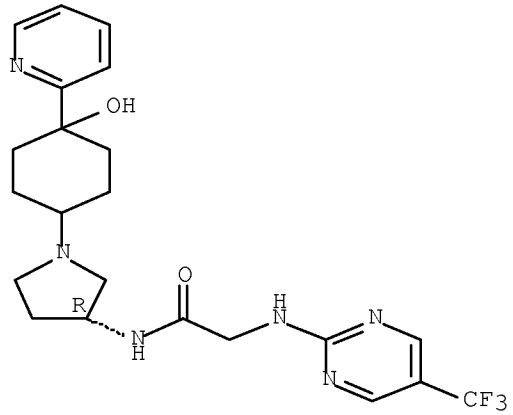
, and

RN 769182-47-0, Acetamide, N-[cis-4-[[4-(dimethylamino)-2-

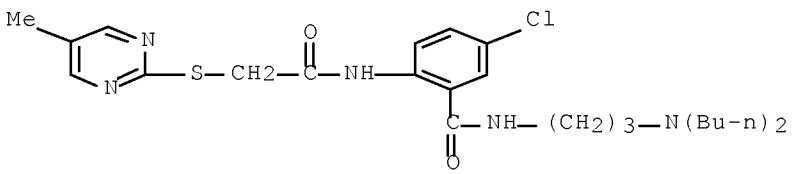
quinolinyl]amino]cyclohexyl]-2-[(4-methyl-2-pyrimidinyl)thio]-,



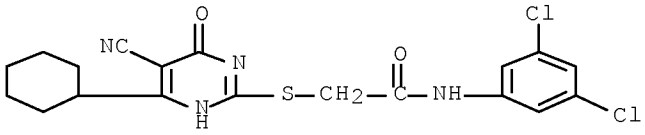
Claims 1- 4 and 35 are rejected under 35 USC 102(e) over Xue, et al., WO 2004050024, entitled to the date of 20021127, describing RN 709024-28-2, Acetamide, N-[1-[4-hydroxy-4-(2-pyridinyl)cyclohexyl]-3-pyrrolidinyl]-2-[[5-(trifluoromethyl)-2-pyrimidinyl]amino]-,



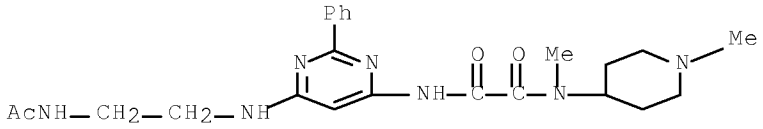
Claims 1- 4 and 35 are rejected under 35 USC 102(e) over Mjalli, et al., WO 2003084997, entitled to the date of 20010410, describing RN 553643-44-0, Benzamide, 5-chloro-N-[3-(dibutylamino)propyl]-2-[[[(5-methyl-2-pyrimidinyl)thio]acetyl]amino]-,



Claims 1- 4 and 35 are rejected under 35 USC 102(e) over Hale, et al., WO 2001007027, entitled to the date of 20000719, describing RN 301177-41-3, Acetamide, 2-[(5-cyano-6-cyclohexyl-1,4-dihydro-4-oxo-2-pyrimidinyl)thio]-N-(3,5-dichlorophenyl)-,

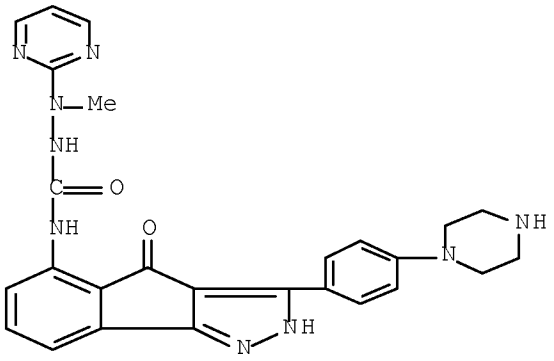


Claims 1- 4 and 35 are rejected under 35 USC 102(e) over Castelhano, et al., WO 2003053366, entitled to the date of 20011220, describing RN 552870-49-2, Ethanediamide, N'-[6-[[2-(acetylamino)ethyl]amino]-2-phenyl-4-pyrimidinyl]-N-methyl-N-(1-methyl-4-piperidinyl)-,



Claims 1- 4 and 35 are rejected under 35 USC 102(a) over Carini, US 6849631, entitled to the date of 20001208, describing RN 435337-24-9, Hydrazinecarboxamide, N-[2,4-dihydro-4-oxo-3-[4-(1-piperazinyl)phenyl]indeno[1,2-c]pyrazol-5-yl]-2-methyl-2-(2-

pyrimidinyl)-,



Rejections Under 35 US 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

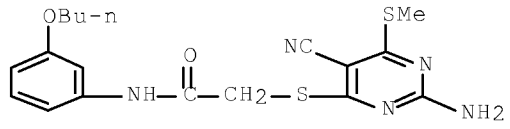
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-36, to the extent that they specifically exclude:

- Acetamide, 2-[[2-amino-5-cyano-6-(methylthio)-4-pyrimidinyl]thio]-N-(3-butoxyphenyl)-;
- Acetamide, 2-[[2-amino-5-cyano-6-(methylthio)-4-pyrimidinyl]thio]-N-2-benzothiazolyl-;
- Acetamide, 2-[[2-amino-5-cyano-6-(methylthio)-4-pyrimidinyl]thio]-N-(5-ethyl-1,3,4-thiadiazol-2-yl)-;
- Acetamide, 2-[[2-amino-5-cyano-6-(methylthio)-4-pyrimidinyl]thio]-N-(4-methyl-2-thiazolyl)-; and
- Acetamide, 2-[[2-amino-5-cyano-6-(methylthio)-4-pyrimidinyl]thio]-N-2-thiazolyl-;

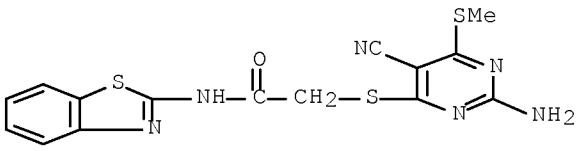
are rejected under 35 U.S.C. 103(a) as being unpatentable over each of the following references, respectively:

RN 339582-02-4 REGISTRY
ED Entered STN: 06 Jun 2001
CN Acetamide, 2-[[2-amino-5-cyano-6-(methylthio)-4-pyrimidinyl]thio]-N-(3-butoxyphenyl)- (CA INDEX NAME)
SR Chemical Library
Supplier: Zelinsky Institute of Organic Chemistry



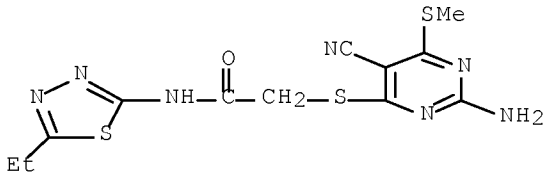
;

RN 339156-32-0 REGISTRY
ED Entered STN: 01 Jun 2001
CN Acetamide, 2-[[2-amino-5-cyano-6-(methylthio)-4-pyrimidinyl]thio]-N-2-benzothiazolyl- (CA INDEX NAME)
SR Chemical Library
Supplier: Zelinsky Institute of Organic Chemistry



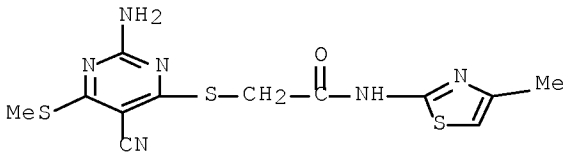
;

RN 339156-78-4 REGISTRY
ED Entered STN: 01 Jun 2001
CN Acetamide, 2-[[2-amino-5-cyano-6-(methylthio)-4-pyrimidinyl]thio]-N-(5-ethyl-1,3,4-thiadiazol-2-yl)- (CA INDEX NAME)
SR Chemical Library
Supplier: Interbioscreen Ltd.



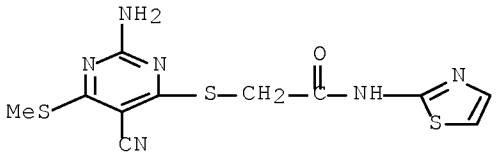
;

RN 339156-81-9 REGISTRY
ED Entered STN: 01 Jun 2001
CN Acetamide, 2-[[2-amino-5-cyano-6-(methylthio)-4-pyrimidinyl]thio]-N-(4-methyl-2-thiazolyl)- (CA INDEX NAME)
SR Chemical Library
Supplier: Interbioscreen Ltd.



; and

RN 328285-70-7 REGISTRY
ED Entered STN: 21 Mar 2001
CN Acetamide, 2-[[2-amino-5-cyano-6-(methylthio)-4-pyrimidinyl]thio]-N-2-thiazolyl- (CA INDEX NAME)
SR Chemical Library
Supplier: TimTec, Inc.



.

Although these compounds are excluded by the proviso in claim 1, the prior art compounds render obvious lower alkyl homologs and position isomers thereof,

encompassed by the present claims. The skilled chemist would be well motivated to prepare other compounds and their compositions homologous with those of the cited prior art according to the procedures taught therein with the expectation that such compounds would have the same activity.

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to modify the prior art compounds to prepare compounds homologous and/or isomeric therewith. One of ordinary skill in the art would have been motivated to prepare the instantly claimed compounds because such structurally homologous compounds are expected to possess similar properties to the cited prior art compounds. It has been held that compounds that are structurally homologous and/or isomeric to prior art compounds are *prima facie* obvious, absent a showing of unexpected results.

> An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties.

In re Payne, 203 USPQ 245, 254 (CCPA 1979). See *In re Papesch*, 137 USPQ 43 (CCPA 1963) and *In re Dillon*, 16 USPQ2d 1897 (Fed.Cir. 1991) (discussed in MPEP § 2144) for an extensive case law review of obviousness based on close structural chemical compound similarity. See MPEP § 2144.08, ¶ II.A.4(c). Compounds which are homologs (compounds differing regularly by the successive addition or subtraction of the same chemical group, e.g., by -CH3 or lower alkyl groups), or positions isomers, as here, are generally of sufficiently close structural similarity that there is a presumed

expectation that such compounds possess similar properties. *In re Wilder*, 195 USPQ 426 (CCPA 1977).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cecilia M. Jaisle, J.D. whose telephone number is 571-272-9931. The examiner can normally be reached on Monday through Friday; 8:30 am through 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson can be reached on 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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